

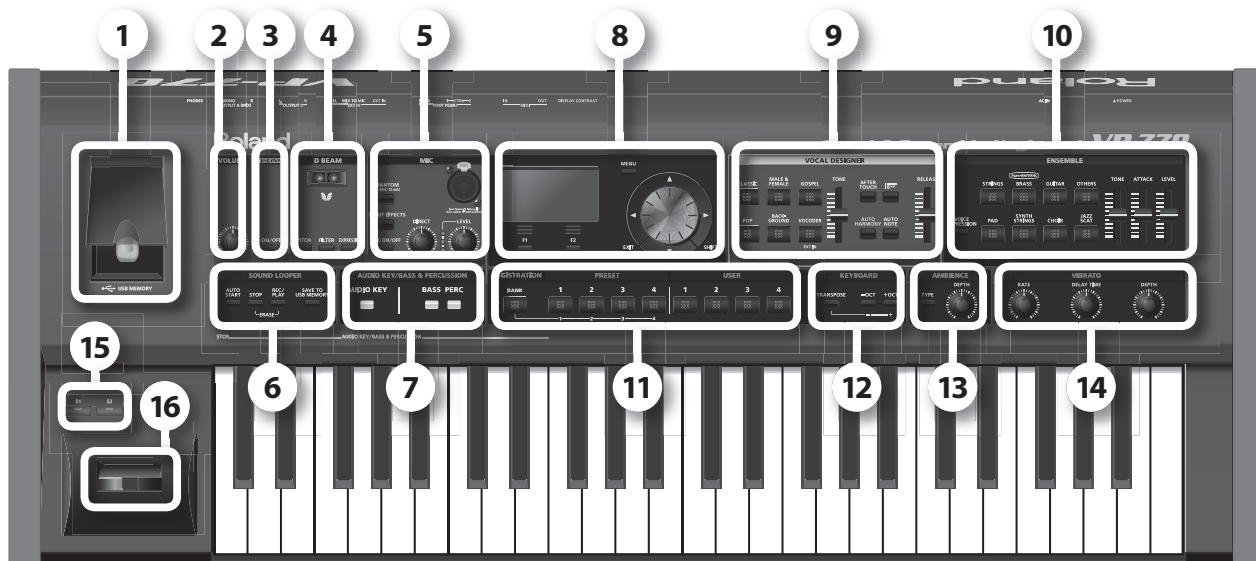
VP-770

Vocal & Ensemble Keyboard

Owner's Manual

Roland®

Names of Things and What They Do



Front Panel

1 USB MEMORY

p. 22

Connect USB memory here.
Audio files saved on USB memory can be played back (p. 68), and phrases recorded using SOUND LOOPER (p. 74) can be stored on USB memory. You can also save registration sets to USB memory, or load previously-saved registration sets into the VP-770 (p. 103).

2 VOLUME

p. 26

Adjusts the overall volume of the VP-770.

3 V-LINK

p. 118

This button turns the V-LINK function on/off.
When you press this button to turn V-LINK on, the button will light blue.

4 D BEAM

p. 60

Here you can switch the D Beam function on/off. This lets you apply various effects to the sound by moving your hand above the sensor.

[PITCH] Button

p. 60

This lets you use the D Beam controller to control the pitch (This is the same effect as the pitch bend lever.)

[FILTER] Button

p. 60

This lets you use the D Beam controller to control the brightness of the sound.

[EXPRESSION] Button

p. 60

This lets you use the D Beam controller to control the expression.

5 MIC

p. 19

Connect the included microphone here.
The MIC input jack supports both XLR type and phone type plugs. The XLR type connector provides 48 V phantom power, allowing you to connect a phantom-powered condenser microphone.

[PHANTOM] Button

p. 19

Turn this on if you're using a phantom-powered condenser microphone.

* Turn this off if you're using the included microphone.

[INPUT EFFECT] Button

p. 32

This applies an effect to the microphone input. Turn this on if you want to use an input effect.

[MIC ON/OFF] Button

p. 31

Turn this on if you want to use the microphone.

[DIRECT] Knob

p. 30

This adjusts the volume of the live audio from the microphone input.

[LEVEL] Knob/Indicator

p. 28

This adjusts/indicates the mic's input level.

6 SOUND LOOPER

p. 74

This function lets you record, overdub, and loop-playback your performance.

[AUTO START] Button

p. 74

If you've pressed this button to turn it on, recording will begin the moment you start performing.

[STOP] Button

p. 75

This stops recording or loop playback.

[REC/PLAY] Button p. 74
This starts recording, overdubbing, or playback.

[SAVE TO USB MEMORY] Button p. 76
This saves the recorded phrase to USB memory.

7 AUDIO KEY/ BASS & PERCUSSION p. 68 p. 48

[AUDIO KEY] Button p. 68
The C2–D3 keys of the keyboard will play back audio files stored in USB memory.

[BASS] Button p. 48
The C2–E3 keys of the keyboard will play the bass sound.

[PERC] Button p. 48
The C2–E3 keys of the keyboard will play percussion.

8 Display

Various information is shown here as you operate the VP-770.

[F1], [F2] Buttons
These buttons execute different functions according to the contents shown in the display.

[MENU] Button p. 94
Accesses the MENU screen in the screen.

[EXIT] Button
Returns to the previous screen. In some screens, this button cancels the operation that's being executed.

[SHIFT] Button
Use this button in conjunction with other buttons.

Cursor Buttons
These buttons move the cursor position up/down/left/right. In the EDIT screen, you can change a value in steps of one by pressing the cursor [◀] or [▶] button.

Value Dial
Use this to modify a value.
By holding down the [SHIFT] button and turning the value dial you can change a value in larger steps.

9 VOCAL DESIGNER p. 27

Here you can select a Vocal Designer sound and modify it.

[CLASSIC], [MALE & FEMALE], [GOSPEL], [POP], [BACKGROUND], [VOCODER] Buttons p. 27
These select the sound of the Vocal Designer part.

[TONE] Slider p. 34
This adjusts the tone of the Vocal Designer.

[AFTERTOUCH] Button p. 64
This lets you use aftertouch to control the Vocal Designer tone.

[8va] Button p. 35
This shifts the Vocal Designer one octave higher in pitch.

[AUTO HARMONY] Button p. 36
This turns on the Auto Harmony function, which automatically adds a backing chorus to your vocal.

[AUTO NOTE] Button p. 38
This turns on the Auto Note function that lets you produce sound without having to play the keyboard.

[RELEASE] Slider p. 40
This adjusts the release of the Vocal Designer and Ensemble part.

10 ENSEMBLE p. 42

Here you can select an Ensemble sound and modify it.

[STRINGS], [BRASS], [GUITAR], [OTHERS], [PAD], [SYNTH STRINGS], [CHOIR], [JAZZ SCAT] Buttons p. 42
These select the sound of the Ensemble part.

[TONE] Slider p. 45
This adjusts the tone of the Ensemble part.

[ATTACK] Slider p. 46
This adjusts the attack of the Ensemble part.

[LEVEL] Slider p. 44
This adjusts the volume of the Ensemble part.

[VOICE EXPRESSION] Button p. 66
This lets you use your voice to adjust the volume of the Ensemble part.

11 REGISTRATION p. 78

These buttons let you store different combinations of Vocal Designer and Ensemble sounds along with various settings.

12 KEYBOARD p. 52

Here you can raise or lower the pitch of the keyboard in steps of semitones or octaves.

13 AMBIENCE p. 50

Here you can adjust the type and depth of ambience (reverberation).

[TYPE] Button p. 50
This selects the type of reverberation.

[DEPTH] Knob p. 50
This adjusts the amount of reverberation.

14 VIBRATO p. 41

Here you can adjust the vibrato.

[RATE] Knob p. 41
This adjusts the vibrato speed.

[DELAY TIME] Knob p. 41
This adjusts the time until vibrato begins to apply.

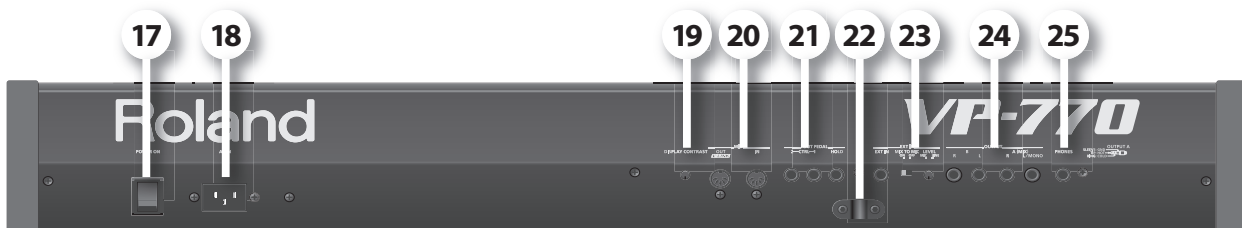
[DEPTH] Knob p. 41
This adjusts the vibrato depth.

15 [S1], [S2] Buttons p. 58

By pressing the [S1] or [S2] button you can apply an effect to the sound or modify it. You can assign various functions to these switches.

16 Pitch Bend/Modulation Lever p. 56

You can use this to modify the pitch or apply vibrato.



Rear Panel

17 [POWER ON] Switch p. 24

This turns the power on/off.

* If you need to turn off the power completely, first turn off the [POWER ON] switch, then unplug the power cord from the power outlet. Refer to "Power Supply" chapter in "Using the Unit Safely" (separate document).

18 AC IN Connector p. 17

Connect the included power code here.

19 [DISPLAY CONTRAST] Knob p. 25

Adjust the display's contrast.

20 MIDI Connectors p. 116

Connect these to external MIDI devices.

21 PEDAL Jacks p. 21, 62

Connect these an expression pedal, foot switch and hold pedal.

22 Cable Clamp p. 21

Pass the microphone cable through this clamp.

23 EXT IN Jack p. 20, 112

Connect an external synthesizer or microphone (phone plug).

24 OUTPUT Jacks p. 18

These jacks output the VP-770's sound in stereo (L/R).

OUTPUT A (MIX) (L/MONO, R) p. 18

These jacks output the audio signal in stereo to your amp or mixer. If you're outputting in monaural, connect to the L jack.

OUTPUT B (L, R) p. 98

Depending on the system setting "Out B Assign" (p. 98), these jacks can independently output the ambience component, the ensemble part, or the audio signal of the audio key. If you connect a plug to the OUTPUT B jack, the audio signal specified by the system setting "Out B Assign" will not be output from the OUTPUT A jack.

25 PHONES Jack p. 18

This is the jack for connecting headphones (sold separately).

Please be aware that in the screen shots shown in this document, the registration names and tone names differ from the factory settings.

Before using this unit, carefully read the sections entitled: "IMPORTANT SAFETY INSTRUCTIONS", "USING THE UNIT SAFELY", and "IMPORTANT NOTES" chapter in "Using the Unit Safely" (separate document). These sections provide important information concerning the proper operation of the unit. Additionally, in order to feel assured that you have gained a good grasp of every feature provided by your new unit, Owner's Manual should be read in its entirety. The manual should be saved and kept on hand as a convenient reference.

* MPEG Layer-3 audio compression technology is licensed from Fraunhofer IIS Corporation and THOMSON Multimedia Corporation.

* MMP (Moore Microprocessor Portfolio) refers to a patent portfolio concerned with microprocessor architecture, which was developed by Technology Properties Limited (TPL). Roland has licensed this technology from the TPL Group.

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The Ancestry of the VP

1939 marks the invention of the “vocoder,” a method of compressing a vocal signal.

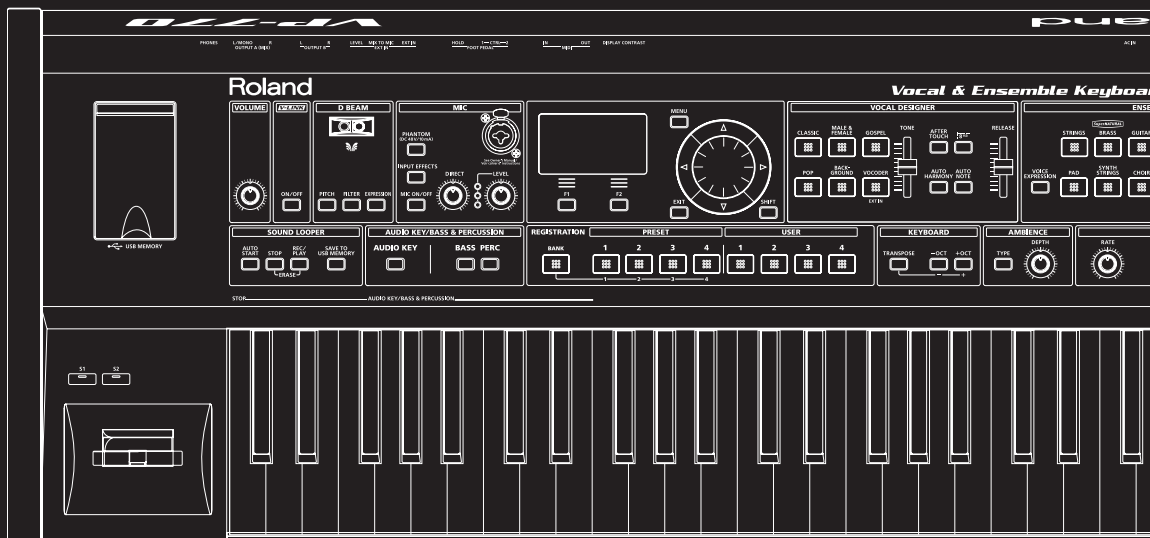
Subsequently used during World War II as a way to scramble communications, the vocoder began to achieve popularity as an electronic musical instrument in the 1970's. Most vocoders of that time didn't provide a keyboard or carrier signal (analogous to the vocal cords of a human), so you had to separately provide a synthesizer in order to produce sound.

1979 was the year in which Roland released the VP-330, a new idea that combined a vocoder with a strings-type keyboard, making it simple to produce sound without needing to use other equipment. The VP-330 enabled you to create distinctive vocal sounds without specialized knowledge of vocoder parameters, and still continues to be loved by musicians around the world.

2006 saw the appearance of the VP-550, featuring Roland's “Vocal Designer” human vocal modeling technology—a leap beyond vocoding.

2009 now sees the birth of the VP-770, bringing you a further evolution of Vocal Designer and cutting-edge SuperNATURAL technology.

“Ultimate vocals for all musicians” – that's the mission of the VP.



Features of the VP-770

The VP-770 is a keyboard featuring cutting-edge “Vocal Designer” human vocal modeling technology. Just connect a microphone, play the keyboard while you sing, and let the VP-770 model incredibly realistic and natural vocals.

Highest Quality Vocals

Unlike the choir sounds you’ve heard from samplers and synthesizers, the “Vocal Designer” modeling technology built into the VP-770 lets you actually “sing the lyrics” — and it generates natural and realistic vocals that are simply beyond all comparison with conventional vocoders.

In other words, the VP-770 lets you do it all; from beautiful choirs echoing in a cathedral, to funky gospel, to background choruses for pop and rock bands.

No longer will you need to call multiple vocalists to your live performances or recording sessions.

Simply play the VP-770 and start enjoying the top quality vocal sounds you’ve dreamed of.

Rich Ensembles

In addition to Vocal Designer, the VP-770 features “ensemble” parts that use SuperNATURAL technology and carefully selected high-quality PCM (digitally sampled) sounds.

Brass ensembles using SuperNATURAL technology, richly expressive strings, and a broad range of high-quality choir sounds can be layered with Vocal Designer, allowing you to perform unbelievably rich ensembles.

By using “Bass and Percussion” you can also perform voice bass or voice percussion.

In addition, you can use the “Audio Key” function to layer the playback of audio files saved on USB memory (sold separately).

This means that all by itself, the VP-770 lets you rival an orchestra or a cappella group.

Roland SuperNATURAL Technology

Proprietary Roland sound generation technology that realistically reproduces the tonal changes and performance techniques distinctive of an acoustic instrument, allowing you to perform music that is natural and richly expressive.

SuperNATURAL

An Overview of the VP-770

The VP-770 has three parts, and each part occupies its own section of the front panel.



If you turn on a sound button for a part, you'll be able to play that part.

If you turn on a sound button for two or more parts, you'll be able to play those parts simultaneously.

By combining these parts, you can make the VP-770 produce an incredible range of vocal sounds.

PROJECT

All settings of the VP-770 can be saved to USB memory as a "project."

SYSTEM

System memory stores settings that apply to the entire VP-770, such as keyboard sensitivity and master tuning.

REGISTRATION

A registration lets you store the "sound and settings" of each part; you can then use the four banks of eight buttons to instantly recall 32 different settings (preset: 16, user: 16).

VOCAL DESIGNER

This part uses the keyboard and the microphone input to model vocal sounds. Use the keyboard to control the pitch, and use the microphone to control all other aspects of the sound.

Carrier

This has the same role that the "vocal cords" play in a human voice. According to the pitches you play on the keyboard, this generates the signal that forms the basis of the sound (tone and pitch). Use the sound buttons to switch between different vocal characters such as classic or pop.



Modulator

From the voice you input via the microphone input, this extracts the resonances (formants) that result from the shape of your throat and larynx and the movement of your mouth, and uses these formants to modulate the signal produced by the carrier. This will reproduce not only the loudness of your voice, but also let the lyrics be heard clearly and intelligibly.

AMBIENCE

This section applies the ambience of a hall or studio to the sound from the three parts.



ENSEMBLE

This part lets you play high-quality sounds from the keyboard. You can switch sounds (such as a brass ensemble using SuperNATURAL technology, or a strings sound) simply by selecting a sound button. By layering the Ensemble part with the Vocal Designer you can create even richer sounds.



BASS & PERCUSSION

If you turn on one of these sound buttons, the seventeen left-most keys of the keyboard will play voice bass or voice percussion sounds. You can easily do things such as using your left hand to play a bass line while using your right hand to play the melody.



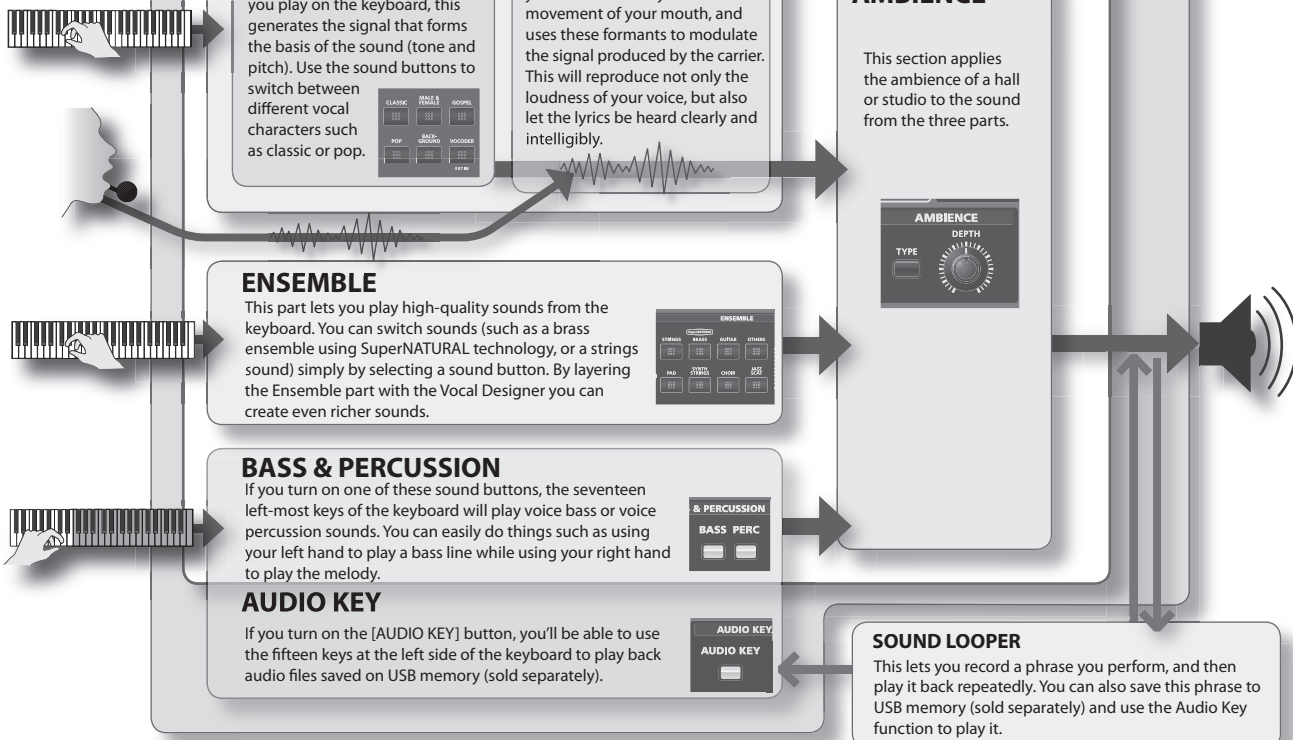
AUDIO KEY

If you turn on the [AUDIO KEY] button, you'll be able to use the fifteen keys at the left side of the keyboard to play back audio files saved on USB memory (sold separately).



SOUND LOOPER

This lets you record a phrase you perform, and then play it back repeatedly. You can also save this phrase to USB memory (sold separately) and use the Audio Key function to play it.



About Vocal Designer

“Vocal Designer” human vocal modeling technology is a further evolution of the “vocoder.” Here’s a simple explanation of the vocoder.

What’s a Vocoder?

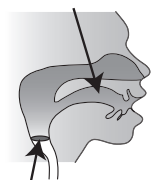
The “vocoder” was invented by the physicist H. Dudley in 1939 as a technology for compressing a voice communication signal. Subsequently, musical instruments based on this technology were developed, allowing you to play melodies and harmonies using a human voice. Of course, the audio source can be anything (not just a human voice) but because the vocoder has its basis in the sound-producing structure of the human voice, we’ll be talking about it in terms of how a human voice is produced.

If we ignore differences of loudness, pitch, and variation between individuals, the waveform produced by our vocal cords is essentially identical regardless of what you’re saying (e.g., “ahh” or “eeh”). We can distinguish spoken or sung words because of the various resonances (formants) created by our vocal tract (the shape of our throat and the movement of the larynx and mouth) and additional sounds called “fricatives,” “plosives,” and “sibilants” that are added in varying ways over time. The effect of the waveform created by the vocal cords actually has a rather minimal effect on what the listener hears.

A vocoder analyzes these time-varying changes, electrically synthesizes the shape of the throat and movements of the mouth (the formant movements), and uses these formants to modulate a musical signal (the carrier) rather than the waveform produced by the vocal cords. The vocoder “voice” produced in this way was closer to that of a robot in a science fiction movie rather than the voice of an actual human.

Vocal Designer uses cutting-edge modeling technology to bring about a revolutionary leap in the accuracy of this synthesis, succeeding in generating a “human voice” that is incomparably more realistic and natural than the sounds produced by vocoders of the past.

Resonances (formants) produced by the vocal tract (shape of the throat and larynx) and movements of the mouth



Vocal cords (carrier)

Play Like You’re Singing

Vocal Designer is constructed so that elements other than pitch are expressed by your voice via the microphone. You play the keyboard to control the pitch.

Vocal Designer won’t produce sound if you are only vocalizing into the microphone or only playing the keyboard. This means that in order to take advantage of Vocal Designer, the timing at which you play the keyboard and vocalize into the microphone is extremely important. When you’re performing a rapid passage, you will probably find it best to hold down the keys (or press the hold pedal → p. 62) and use your voice to play the rhythm.

Unlike on typical synthesizers, the volume is controlled by the microphone. Use your voice to draw the curve. Using your voice, you can produce a range of expression that you might even find extreme.

The most important technique for taking advantage of Vocal Designer is to

“Play like you’re singing”



Introducing the Sounds

VOCAL DESIGNER



Sound	Description
CLASSIC	Large choirs suitable for classical music. These are also a good choice for any choral sound—and not just classical—and will match nearly any style of music. They have a clear sound, and are a good choice when you want the lyrics to be heard.
MALE & FEMALE	Mixed choirs with independent male and female parts. With sparser chords, they produce a deeper and more three-dimensional sound than “CLASSIC.” You’ll hear the female voices in the high range, and the male voices in the low range. Female voices will be heard on the right side of the stereo sound field, while male voices will be on the left side.
GOSPEL	These choirs include the distinctive phrasings and irregularities that are distinctive of gospel music. They are an ideal choice for jazz or gospel.
POP	Choirs with a fewer number of members, broadly useful for popular music as well as songs that contain rapid passages. The sound is clear, making these a good choice when the lyrics need to be heard.
BACKGROUND	Sounds suitable for a backing chorus.
VOCODER	Vintage vocoder sounds.

* For some sounds, you can access a list of variation sounds by holding down the [SHIFT] button and pressing the sound button. Use the value dial or the up/down cursor buttons to select a sound from the list.

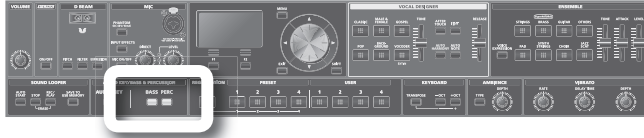
ENSEMBLE



Sound	Description
STRINGS	Acoustic string sounds with emphasis placed on the performance techniques that are inherent to strings.
BRASS	Brass sounds that use SuperNATURAL technology.
GUITAR	Guitar sounds.
OTHERS	Other sounds.
PAD	Pad sounds.
SYNTH STRINGS	Synthesizer string sounds.
CHOIR	Sampled choir sounds. You can get an even more majestic effect by layering these with one of the sounds of the Vocal Designer part.
JAZZ SCAT	This sound provides samples of jazz scat singing. It’s great for songs that contain rapid passages and for scat soloing.

* For some sounds, you can access a list of variation sounds by holding down the [SHIFT] button and pressing the sound button. Use the value dial or the up/down cursor buttons to select a sound from the list.

BASS & PERCUSSION

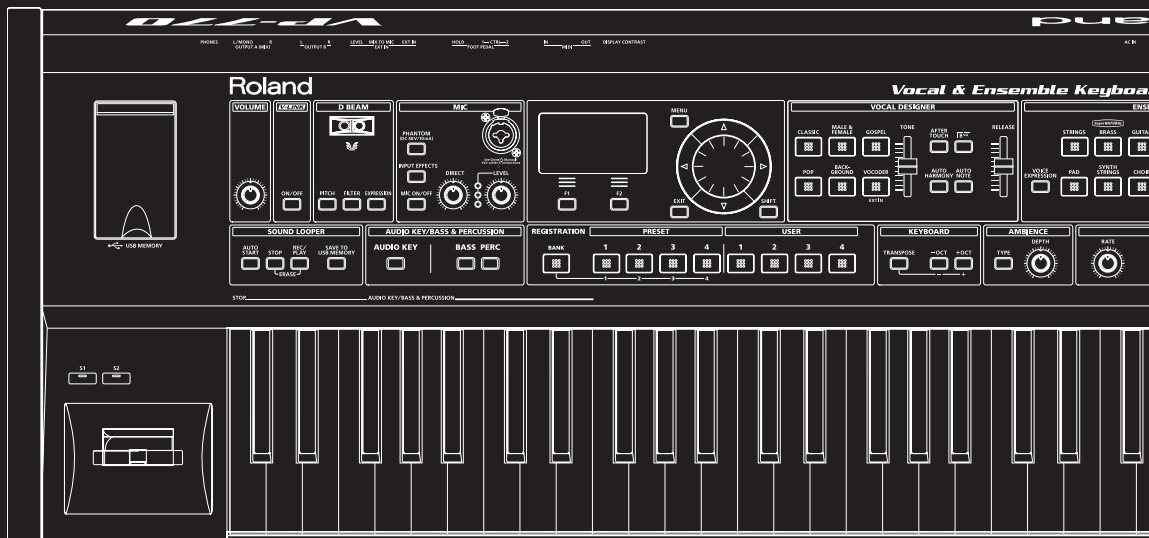


Sound	Description
BASS	Bass sounds.
PERC	This provides a collection of voice percussion sounds.

* You can also select a bass sound by holding down the [SHIFT] button and pressing the [BASS] button, and then turning the value dial.

Making Connections

In this chapter you'll connect the VP-770 to your external equipment and set it up.

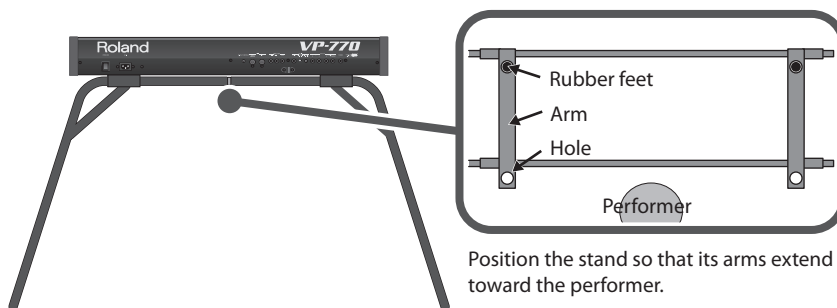


Making Connections

Placing the VP-770 on the KS-12 Stand

If you place the VP-770 on a stand, you must use the KS-12 (sold separately).

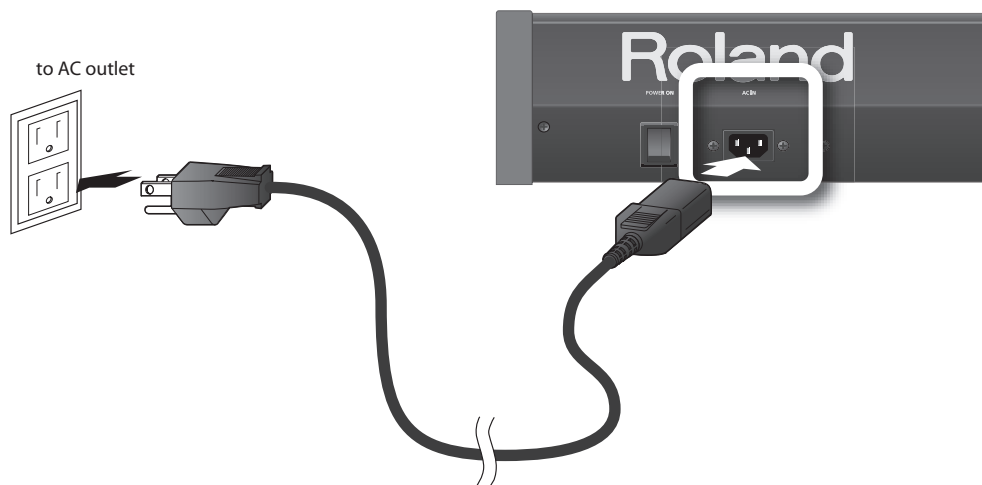
Seen from the rear



- * When placing the VP-770 on the stand, be careful not to pinch your fingers between the instrument and the stand.
- * Using the VP-770 with any other stand may produce an unstable situation, possibly causing the instrument to fall or overturn, and resulting in injury or damage.
- * For details on how to assemble the stand, refer to the owner's manual that accompanied the stand.

Connect the Power Cord (AC IN)

1. Connect the included power cord to the VP-770's AC IN connector, and plug the other end into an AC outlet.

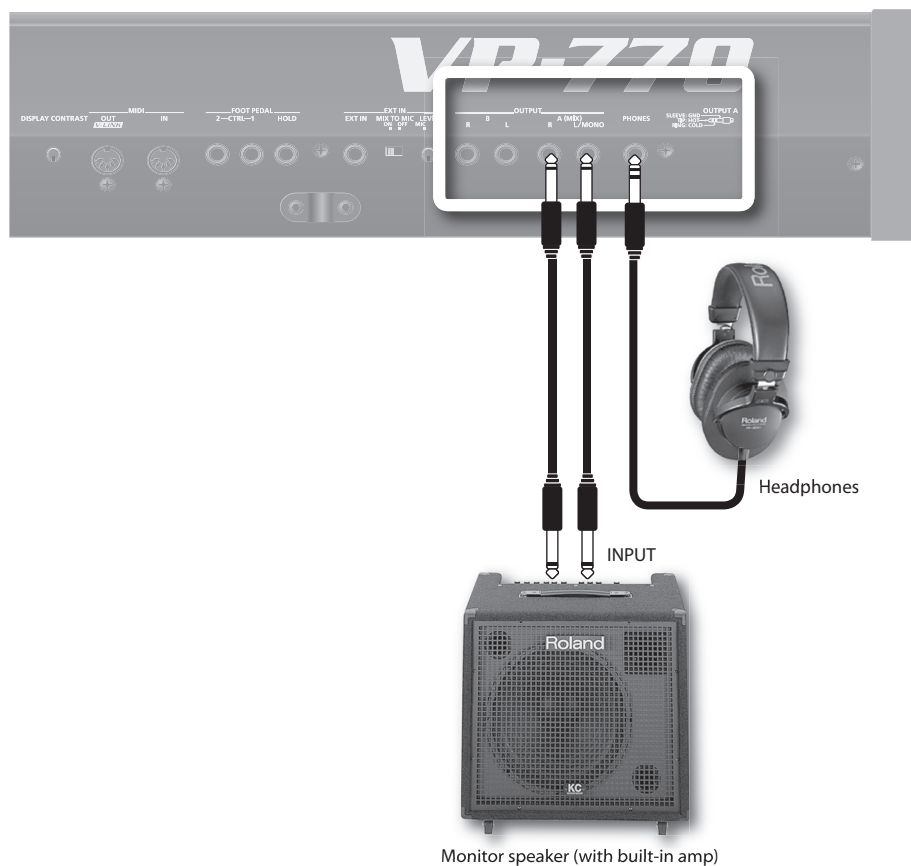


Connecting Your Amp or Speakers (OUTPUT/PHONES)

The VP-770 doesn't contain an amp or speakers. In order to hear sound, you'll need to connect it to monitor speakers (with a built-in amp), a stereo set or other audio system, or headphones.

*** To prevent malfunction and/or damage to speakers or other devices, always turn down the volume, and turn off the power on all devices before making any connections.**

1. Make connections as shown.



If you're outputting in mono, connect your equipment to the L/MONO jack.



Audio cables and headphones aren't included with the VP-770. You'll need to obtain them separately.

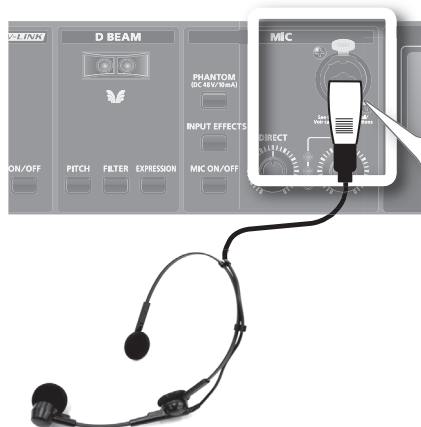
Connecting Your Microphone (MIC)

A microphone is indispensable for performing with the VP-770. The VP-770 models vocal sounds by using your voice that's input via the microphone.
A headset-type microphone is included with the VP-770.



If You're Using the Included Microphone (MIC)

1. Connect it to the MIC jack as shown.



* This instrument is equipped with balanced (XLR/TRS) type jacks. Wiring diagrams for these jacks are shown below. Make connections after first checking the wiring diagrams of other equipment you intend to connect.



* Howling could be produced depending on the location of microphone(s). This can be remedied by:

1. Changing the direction of the microphone(s).
2. Relocating microphone(s) at a greater distance from speakers.
3. Lowering volume levels.

If You're Using a Phantom-powered Condenser Mic

The VP-770's MIC jack supports phantom power.

* Turn this off if you're using the included microphone.

* Always turn the phantom power off when connecting any device other than condenser microphones that require phantom power. You risk causing damage if you mistakenly supply phantom power to dynamic microphones, audio playback devices, or other devices that don't require such power. Be sure to check the specifications of any microphone you intend to use by referring to the manual that came with it.

(This instrument's phantom power: 48 V DC, 10 mA Max)

1. Press the [PHANTOM] button.

The confirmation message will appear.

2. Press the [F1] (OK) button.

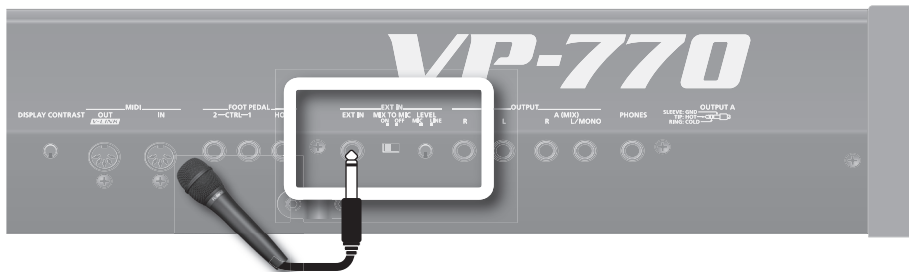
The [PHANTOM] button will light, and phantom power will be supplied.



Immediately after powering up the VP-770, the phantom power supply will be off.

If You're Connecting Your Microphone to the EXT IN Jack (EXT IN)

- 1. Connect it to the EXT IN jack as shown.**



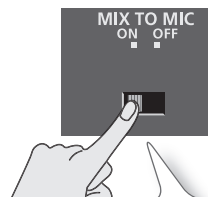
- ## 2. Turn the [EXT IN] knob to "MIC."



This knob adjusts the level of the sound from the EXT IN jack. (Turn the knob toward "MIC" to increase the level, or toward "LINE" to decrease it.) If you've connected a mic, you should turn this to "MIC"

→ Refer to “Adjusting the Microphone Input Level” (p. 28) for more about this adjustment.

- ### 3. Set the [MIX TO MIC] switch "ON."



The [MIX TO MIC] switch setting determines whether the sound from the EXT IN jack will be used as a microphone input (modulator; the ON setting) or as the carrier (the OFF setting). We'll be using it as a microphone input, so select the "ON" position here.

Carrier

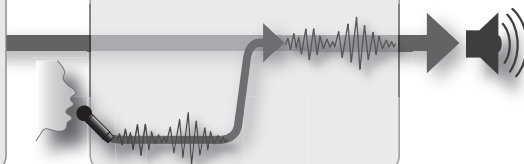
This is the signal that is the basis of the sound and determines its timbre and pitch. To use the sound from the rear panel EXT IN jack as the carrier, hold down the [SHIFT] button, press the [VOCODER] sound button, and select the bottom sound in the list that appears.

If you want the sound from the rear panel EXT IN jack to be the carrier, set the [MIX TO MIC] switch "OFF" (→ p. 112).

Modulator

The tonal character (formants) of the voice from the microphone input is extracted, and these formants are used to modulate (transform) the carrier signal.

If you want the sound from the rear panel EXT IN jack to be the modulator, set the [MIX TO MIC] switch "ON" (→ p. 114).



Connecting a Pedal (FOOT PEDAL HOLD/CTRL 1/CTRL 2)

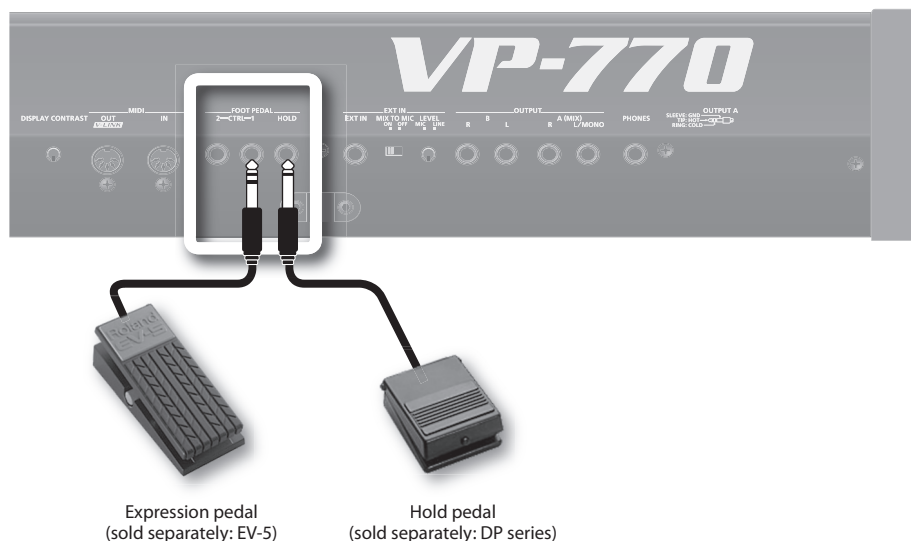
You can connect a hold pedal (sold separately: DP series) and an expression pedal (sold separately: EV-5) to the VP-770.

If an optional hold pedal (DP series) is connected to the rear panel PEDAL HOLD jack, you can press the hold pedal to cause notes to sustain or “hold” even after their keys have been released.

If an optional expression pedal or pedal switch (EV-5, DP series) is connected to the rear panel PEDAL CTRL jack (1, 2), you can use the pedal to control the volume or various functions.

→ Refer to “Using Pedals” (p. 39) for more information.

Make connections as shown.

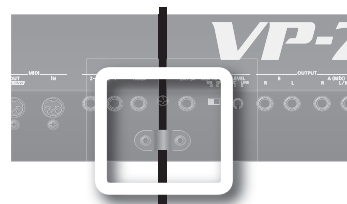


Use only the specified expression pedal (EV-5; sold separately). By connecting any other expression pedals, you risk causing malfunction and/or damage to the unit.

About the Cable Clamp

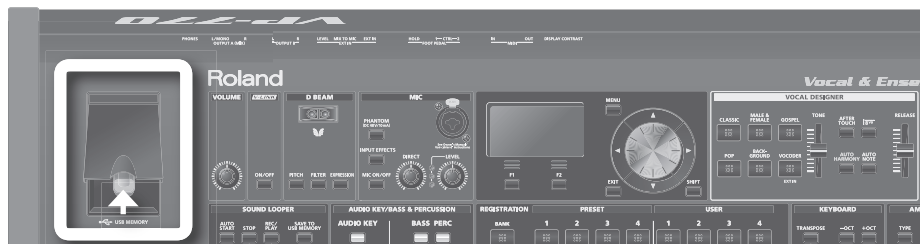
To reduce the risk of the microphone being stolen, use the included Allen wrench to remove the screws from the rear panel cable clamp, pass the microphone cable through the clamp, and retighten the screws to secure the cable clamp.

*** Keep the removed screws out of the reach of small children to ensure they are not swallowed accidentally.**



Connecting USB Memory (Sold Separately)

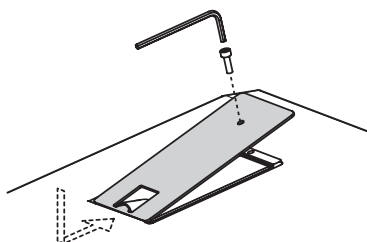
Audio files saved on USB memory (sold separately) can be assigned to the keyboard for playback (p. 68), and you can back up all of the VP-770's settings to USB memory as a "project" (p. 103). Open the USB MEMORY connector cover and insert the USB memory.




- * Be sure to keep the USB MEMORY connector cover closed when not connecting or disconnecting USB memory.
- * Carefully insert the USB memory all the way in—until it is firmly in place.
- * Connect the USB memory after you turn on the VP-770's power. Never disconnect the USB memory while the VP-770 is powered up.

Using the Included USB Memory Protector

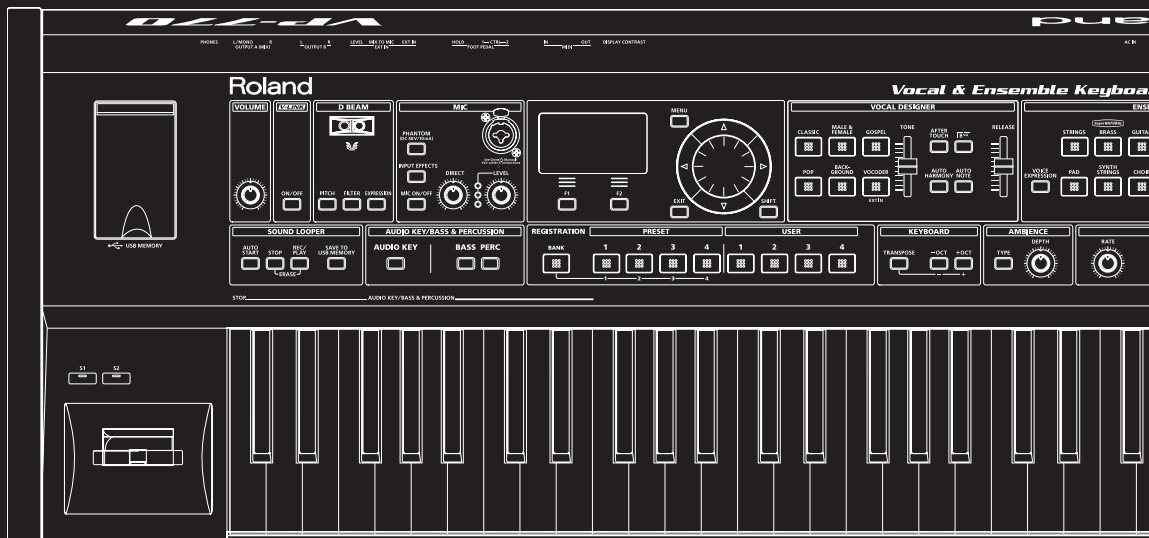
You can use the included USB memory protector to prevent theft of the USB memory connected to the VP-770.



- * You must use the included screw.
 - * You must use the included Allen wrench to tighten or remove the screw. Using a tool that does not match the screw head will damage it.
 - * Be careful not to over-tighten the screw. Doing so may damage the screw's head, causing the wrench to rotate uselessly.
 - * To tighten the screw, turn the Allen wrench clockwise. To loosen the screw, turn the Allen wrench counter-clockwise.
- 
- * Keep the included screw out of the reach of small children to ensure it is not swallowed accidentally.

Performing

In this chapter you'll learn the basics of playing the VP-770. When you've finished it, you will have mastered the basics of the VP-770!



Turning On/Off the Power (POWER ON)

Here's how to turn the VP-770's power on or off.

Turning On the Power



* After completing the connection explained in the previous chapter, make sure to turn on the power by following the steps below. By turning on devices in the wrong order, you risk causing malfunction and/or damage to speakers and other devices.

1. Before you turn on the power, check the following.

Is the VP-770 correctly connected to your peripheral equipment?

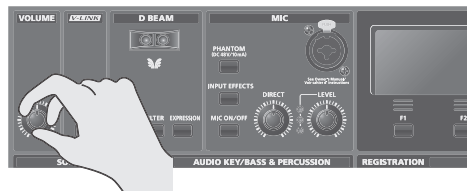
Have you turned down the volume of the VP-770 and the connected audio system to the minimum settings?

2. On the VP-770's rear panel, turn the [POWER ON] switch "on."

* This unit is equipped with a protection circuit. A brief interval (a few seconds) after power up is required before the unit will operate normally.

3. Use the [VOLUME] knob to adjust the volume appropriately.

While you play the keyboard to produce sound, adjust the volume of the VP-770 and of the audio equipment you've connected.



If You Don't Hear Sound, Check the Following

- Is the VP-770 correctly connected to your amp, speaker, or headphones?
- The Vocal Designer part won't produce sound when you play the keyboard unless you are vocalizing into the microphone. → For details, refer to "Performing with Vocal Designer" (→ p. 27)
- If there's no microphone connected, try selecting an Ensemble part sound and playing it from the keyboard (→ p. 42).

Turning Off the Power



1. Before you turn off the power, check the following.

Have you turned down the volume of the VP-770 and the connected audio system to the minimum settings?

2. On the VP-770's rear panel, turn the [POWER ON] switch "off."



If you need to turn off the power completely, first turn off the [POWER ON] switch, then unplug the power cord from the power outlet. Refer to "Power Supply" chapter in "USING THE UNIT SAFELY" (separate document).

Adjusting the Display Contrast (DISPLAY CONTRAST)

The characters in the display may be difficult to view immediately after turning on the VP-770's power or after extended use. If this occurs, turn the rear panel [DISPLAY CONTRAST] knob to make the display legible.



About the Top Screen

The screen that appears first when you turn on the power shows the following information.



Information	Page
Registration number	p. 78
Tone of the Vocal Designer part	p. 27
Tone of the Ensemble part	p. 42

You can select a registration or sound by using the cursor buttons to move the cursor to each item and then turning the value dial.

* Please be aware that in the screen shots shown in this document, the registration names and tone names differ from the factory settings.

Adjusting the Volume (VOLUME)

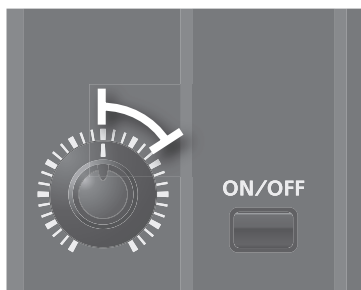
Here's how to adjust the volume of the entire VP-770.



1. Use the [VOLUME] knob to adjust the volume of the entire VP-770.



For best results, adjust the volume of your amp or speaker system so that you get the desired loudness when the [VOLUME] knob is between the 12 o'clock and 2 o'clock positions as shown. Turn the knob toward the right if you want to increase the volume further, or toward the left if you want to decrease the volume.



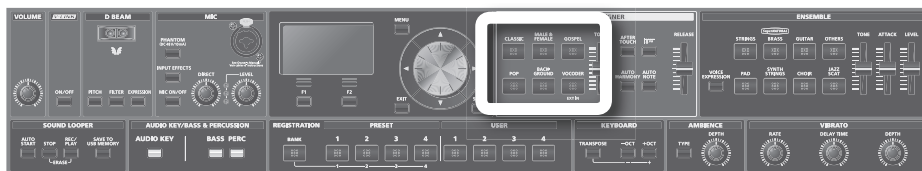
Performing with Vocal Designer (VOCAL DESIGNER)

Let's go ahead and try performing with the Vocal Designer part. While vocalizing into the microphone, play the keyboard and you'll hear realistic and natural voices.

For more about how Vocal Designer works, refer to "About Vocal Designer" (→ p. 12).

Selecting a Sound

Here's how to select a Vocal Designer sound.



To play the Vocal Designer part, press a Vocal Designer sound button to make it light.

If you press the Vocal Designer sound button that's already lit, the button will go dark and you will no longer hear the Vocal Designer part.

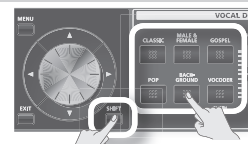


You can play multiple parts simultaneously by turning on sound buttons for the Ensemble part and/or Bass & Percussion part. If you want to play only the Vocal Designer part by itself, turn off the sound buttons of the other parts (make the buttons go dark).

Sound	Description
CLASSIC	Large choirs suitable for classical music. These are also a good choice for any choral sound—not just classical—and will match nearly any style of music. They have a clear sound, and are a good choice when you want the lyrics to be heard.
MALE & FEMALE	Mixed choirs with independent male and female parts. With sparser chords, they produce a deeper and more three-dimensional sound than "CLASSIC." You'll hear the female voices in the high range, and the male voices in the low range. Female voices will be heard on the right side of the stereo sound field, while male voices will be on the left side.
GOSPEL	These choirs include the distinctive phrasings and irregularities that are distinctive of gospel music. They are an ideal choice for jazz or gospel.
POP	Choirs with a fewer number of members, broadly useful for popular music as well as songs that contain rapid passages. The sound is clear, making these a good choice when the lyrics need to be heard.
BACKGROUND	Sounds suitable for a backing chorus.
VOCODER	Vintage vocoder sounds.

Selecting a Variation Sound

- Hold down the [SHIFT] button and press a sound button.**
A list of sounds will appear in the display.
- Use the value dial or the up/down cursor buttons to select a sound in the list.**
- Press the [F2] (SELECT) button to confirm your choice of sound.**



Adjusting the Microphone Input Level (MIC LEVEL)

Here's how to adjust the input level of the microphone connected to the rear panel MIC jack.



1. Vocalize into the microphone.



Try to keep a consistent distance between the microphone and your mouth.

2. Check the indicator status.



LEVEL	Indicator significance
Red	The signal level from the microphone input is too great.
Yellow	The signal level from the microphone input is just right.
Green	A signal is being input from the microphone input.

3. Adjust the [LEVEL] knob so that the yellow indicator lights at the peak of your vocalizing into the microphone.



* The front panel [LEVEL] knob doesn't affect the rear panel EXT IN jack. If you've connected your microphone to the EXT IN jack, use the rear panel [LEVEL] knob to adjust the input level.

Turning the knob toward "MIC" will increase the input level, and turning the knob toward "LINE" will decrease it.



Once you've adjusted the microphone input level, you should generally leave it untouched. Adjust the [VOLUME] knob if you want to raise or lower the volume of the Vocal Designer part.

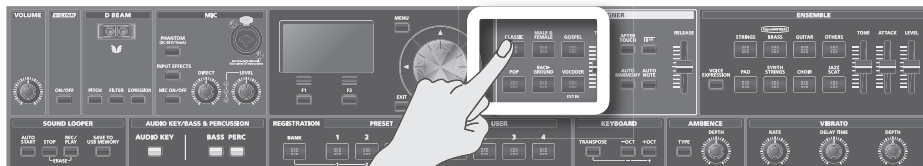


You can apply an effect to the microphone input by turning on the [INPUT EFFECT] button (→ p. 32).

Performing with Vocal Designer

Now you're ready to perform with Vocal Designer.

1. Select a sound.



- To ensure that you can clearly hear the sound of Vocal Designer, turn off the sound buttons of the Ensemble part and the Audio key/Bass & Percussion part.
- To ensure that you're hearing just Vocal Designer and not your own voice, move the [DIRECT] knob to the very lowest position.
- Turn the [MIC ON/OFF] button (p. 31) on (lit).

2. Hold down one or more notes on the keyboard.



3. While holding down the notes, vocalize into the microphone.



The Vocal Designer part will sound according to the volume of your vocalizing.

Even if you're holding down notes, Vocal Designer won't produce sound unless you are vocalizing into the microphone.

Conversely, Vocal Designer won't produce sound if you're not holding down notes, even if you are vocalizing.

Play the keyboard to control the pitch. Try vocalizing a continuous "aah" into the microphone while you play different keys. The pitch will change according to the notes you play.

This time, hold down notes on the keyboard while you vocalize in a more staccato manner; "ah, ah, ah, ..." Vocal Designer will produce sound at the pitches of the chord you're holding down, but at the staccato rhythm you vocalized. That's right — the rhythm is produced by your voice, not by the keyboard. This technique is particularly useful when you're performing phrases with rapid passages.

Unlike typical synthesizers, the volume is controlled from the microphone. Use your voice to draw the curve. Using your voice, you can produce a range of expression that you might even find extreme.

There are just two secrets to using Vocal Designer skillfully.

- Match the timing of the keyboard and your voice (use your voice to play the rhythm)
- Use your voice to control the volume (expression)

If You Don't Hear Sound, Check the Following

- Is the VP-770 correctly connected to your amp, speaker, or headphones?
- Is the VP-770's volume raised?
- Is one of the Vocal Designer sound buttons lit?
- Is the power switch of your microphone turned on?
- Is your microphone connected correctly? (→ p. 19)
- Is the microphone input level raised? (→ p. 28)
- Is the [MIC ON/OFF] button lit? (→ p. 31)

Adding Your Unprocessed Voice (DIRECT)

Now let's add your voice from the microphone directly to the output.



1. Vocalize into the microphone.



2. Turn the [DIRECT] knob to adjust the volume.



Your voice will be output directly from the VP-770.

This time, try singing a favorite song into the microphone. While doing so, choose one of the Vocal Designer sounds (we recommend GOSPEL, POP or BACKGROUND) and hold down the appropriate chord progressions on the keyboard while you sing. Turning on the [AUTO HARMONY] button (p. 36) will make this even more effective.

Vocal Designer will add a backing chorus to your vocal according to the chords you play.



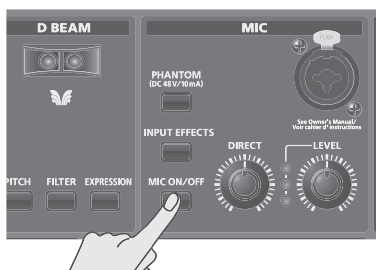
The [DIRECT] knob adjusts the volume of the audio signal you selected in the registration parameter Input Source (p. 86).

Switching Off the Microphone (MIC ON/OFF)

Sometimes you might want to switch off the microphone temporarily. The [MIC ON/OFF] button will be lit when the microphone input is on.



1. Press the [MIC ON/OFF] button to make the button go dark; the microphone input will turn off.



2. Press the button again to make it light; the microphone input will turn on.

Applying Effects to the Microphone (INPUT EFFECT)

You can apply effects to the microphone input. You can use three different vocal effects as input effects.

Effect	Description
NOISE SUP (Noise suppressor)	Suppresses noise when no sound is being input.
EQ (3 Band Equalizer)	Adjusts the character of the low, mid, and high-frequency ranges.
COMP (Compressor)	Reduces high-level sounds and boosts low-level sounds, thus improving the overall volume balance of the sound.



Press the [INPUT EFFECTS] button; the button will light, and the effect will be applied to the microphone.



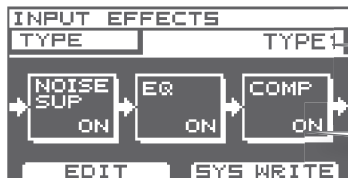
Selecting the Type of Input Effect

1. Hold down the [SHIFT] button and press the [INPUT EFFECTS] button.



The INPUT EFFECTS screen will appear.

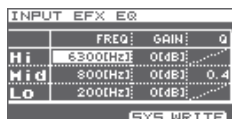
2. Use the cursor buttons and the value dial to edit the effect parameters.



To select the effect type (TYPE 1-4), move the cursor to the TYPE field and turn the value dial.

To turn each effect on/off, move the cursor to the NOISE SUP, EQ, or COMP fields, and turn the value dial.

3. To make detailed settings for each effect, move the cursor to the NOISE SUP, EQ, or COMP fields and press the [F1] (EDIT) button.



4. Use the cursor buttons and the value dial to change the value.

NOISE SUP (Noise suppressor)



Parameter	Value	Description
Attack	0–127	Specifies the duration over which the noise suppressor will disable muting.
Release	0–127	Specifies the time from when the noise suppressor begins operating until muting occurs.
Thres	-60–-36 dB	Specifies the level at which the noise suppressor begins to operate. Sounds below the specified level will be muted.

EQ (3 Band Equalizer)



Parameter	Value	Description
Hi Freq	2000–20000 Hz	Specifies the center frequency at which the high-frequency range will be adjusted.
Hi Gain	-15–+15 dB	Specifies the gain (amount of boost or cut) for the high-frequency range. Positive settings will boost the high-frequency range.
Mid Freq	50–20000 Hz	Specifies the center frequency at which the mid-frequency range will be adjusted.
Mid Gain	-15–+15 dB	Specifies the gain (amount of boost or cut) for the mid-frequency range. Positive settings will boost the mid-frequency range.
Mid Q	0.3–20.0	Specifies the width of the mid-frequency range. Higher settings will narrow the range.
Low Freq	50–4000 Hz	Specifies the center frequency at which the low-frequency range will be adjusted.
Low Gain	-15–+15 dB	Specifies the gain (amount of boost or cut) for the low-frequency range. Positive settings will boost the low-frequency range.

COMP (Compressor)

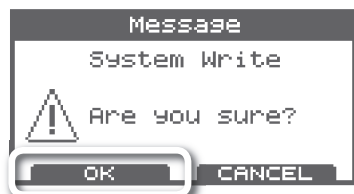


Parameter	Value	Description
Attack	0–100	Specifies the time from when the input exceeds the Threshold (Thres) until the volume begins to be compressed.
Release	0–100	Specifies the time it is to take after the input falls below the Threshold (Thres) before compression ceases.
Thres	-36–0 dB	Specifies the level at which compression will begin.
Ratio	1:1.0–1:INF	Specifies the compression ratio.
Gain	0–+24 dB	Specifies the output gain.

5. If you want to save the edited settings to system memory, press the [F2] (SYS WRITE) button.



6. The confirmation message will appear, then press the [F1] (OK) button.



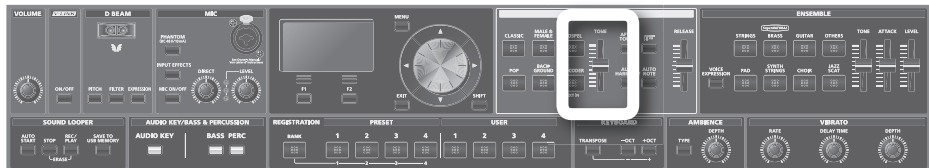
You can save four types of input effect settings (TYPE 1–4).

7. When you've finished making settings, press the [EXIT] button.

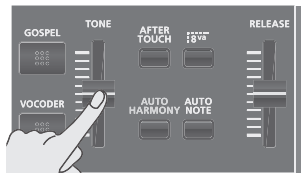


Adjusting the Vocal Designer Tone (VOCAL DESIGNER TONE)

You can move the [TONE] slider to adjust the tone of the Vocal Designer.



Move the [TONE] slider.

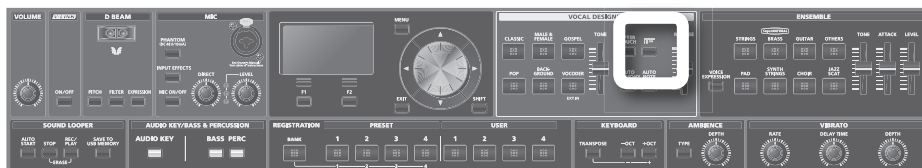


The tone setting is shown in the display while you're moving the slider.

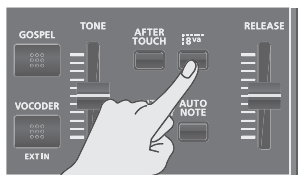
Moving the slider upward will strengthen the highs, producing a clearer sound.
Moving the slider downward will restrain the highs, producing a milder sound.
Setting the slider value to 0 will use the original setting of the selected sound.

Raising Vocal Designer's Pitch by One Octave (8va)

Here's how to raise Vocal Designer's pitch by one octave.



1. Press the [8va] button; it will light, and the pitch of Vocal Designer will rise one octave.



2. Press the button once again; it will go dark, and Vocal Designer will return to its original pitch.

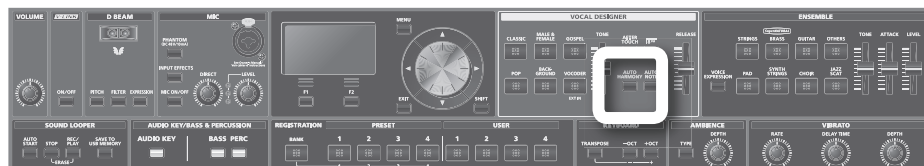
"8va" is a symbol meaning "play one octave higher."



Unlike the KEYBOARD [-OCT] / [+OCT] buttons, the [8va] button applies only to the Vocal Designer part. Use this when you want to raise the Vocal Designer part one octave higher than the ensemble part.

Using the Auto Harmony Function (AUTO HARMONY)

The Auto Harmony function lets you automatically add a backing chorus to your vocal. This function generates harmony based on the melody you sing (the pitch detected from the microphone) and the chords detected from the keyboard. In addition, the harmony will change according to the movement of the melody you sing. When using the Auto Harmony function, we recommend that you raise the [DIRECT] knob (p. 30) to combine it with your own actual voice.



1. Press the [AUTO HARMONY] button; the button will light and the Auto Harmony function will turn on.



2. Play a chord on the keyboard, and vocalize into the microphone.



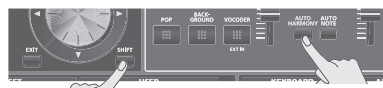
Harmony will be produced based on the chord you play. Try singing a melody into the microphone or changing the chord, and listen to the result.

Making Settings for Auto Harmony

You can choose from several types of harmony to determine the number of harmony voices that will be added to your vocal and how they will be arranged.

If you choose a simple type (such as DUET or TRIO), the Vocal Designer function will generate a simple harmony even if you play numerous keys. This prevents the sound from becoming muddy, for example even when layered with the ensemble sound.

1. Hold down the [SHIFT] button and press the [AUTO HARMONY] button.



The AUTO HARMONY setting screen will appear.



When you turn on the [AUTO HARMONY] button, play a chord on the keyboard, and vocalize into the microphone, the [🎵] icon will appear on the on-screen keyboard to indicate the pitch detected from the microphone, and [H] icons will appear to indicate the generated harmony.

2. Use the cursor buttons and the value dial to change the value.

Parameter	Value	Description
TYPE	DUET, TRIO, TRIO-UPPER, QUARTET, MANHATTAN, JAZZ-OPEN	Switches the type of Auto Harmony.

The notation shown below is an example of a C-major scale.

- The solid black notes indicate the pitch detected from the microphone (this note will not sound *1).
- The white notes indicate the harmony that was generated (Vocal Designer will sound with these notes).
- For a minor chord, the third will be a minor third rather than a major third.

DUET



TRIO



TRIO-UPPER



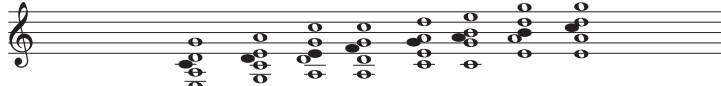
QUARTET



MANHATTAN



JAZZ-OPEN



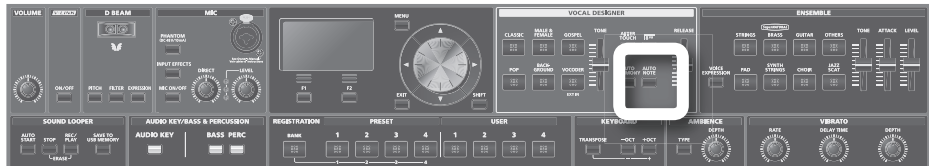
*1 You can sound the black notes by turning on the [AUTO NOTE] button.

3. When you've finished making settings, press the [EXIT] button.



Playing the Vocal Designer Using Only the Microphone (AUTO NOTE)

Normally, Vocal Designer will not sound unless you play the keyboard. However, by using the Auto Note function, you can make Vocal Designer produce sound without your having to play the keyboard; i.e., all you'll need to do is vocalize into the microphone. The Auto Note function will detect the pitch of your voice via the microphone, and automatically sound notes for that pitch.



When you press the [AUTO NOTE] button, the button will light and the Auto Note function will turn on.

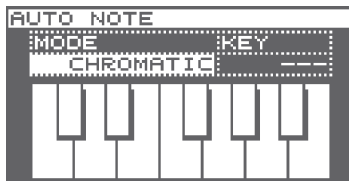


Making settings for Auto Note

1. Hold down the [SHIFT] button and press the [AUTO NOTE] button.



The AUTO NOTE setting screen will appear.



When you turn on the [AUTO NOTE] button and vocalize into the microphone, the detected pitch is shown as a [C] icon on the keyboard displayed on this screen.

2. Use the cursor buttons and the value dial to change the value.

Parameter	Value	Description
MODE	CHROMATIC	This is a chromatic scale. The pitch detected from the microphone is converted to notes at semitone intervals.
	DIATONIC	This is a diatonic scale. The pitch detected from the microphone is converted to notes at diatonic intervals. You can use the KEY parameter to specify the key of the scale.
KEY	C, C#, D, D#, E, F, F#, G, G#, A, A#, B	Specifies the key when MODE is set to "DIATONIC" (diatonic scale).

3. When you've finished making settings, press the [EXIT] button.



Adding an Effect when You Apply Pressure to the Keyboard (AFTERTOUCH)

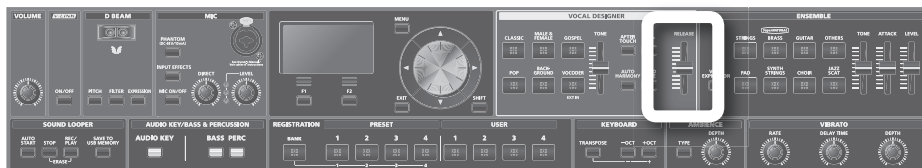
You can add an effect to Vocal Designer by applying pressure (aftertouch) to the keyboard.



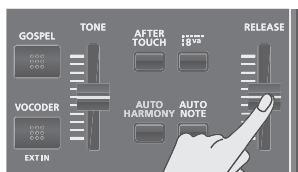
→ For details, refer to “Adding an effect by applying pressure to the keyboard (AFTERTOUCH)” (p. 64).

Adjusting the Release of the Notes (RELEASE)

You can adjust the release for the Vocal Designer and Ensemble by moving the [RELEASE] slider. Release is the time from note-off until the sound has disappeared.



Move the [RELEASE] slider.



The release value is shown in the display while you move the slider.



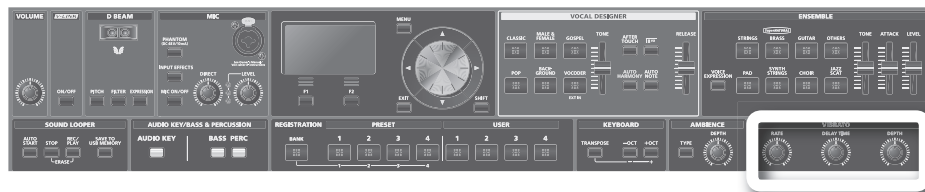
The [RELEASE] slider applies a relative change to the release value specified for each sound. When the [RELEASE] slider is at zero, the release value will be as specified by the settings of that sound.

Moving the slider upward will lengthen the time from note-off until the sound disappears.

Moving the slider downward will shorten the time from note-off until the sound disappears.

Adjusting the Vibrato (VIBRATO)

You can use the three [VIBRATO] knobs to adjust the vibrato for the Vocal Designer and Ensemble. Vibrato is an effect that cyclically modulates the sound. By applying it to the Vocal Designer you can simulate the natural vibrato of a voice.



Turn the three [VIBRATO] knobs.



The vibrato settings are shown in the display while you turn the knobs.



These three knobs apply a relative change to the vibrato settings specified for each sound. When each knob is at zero, the vibrato settings will be as specified by the settings of that sound.

Knob	Parameter	Value	Description
RATE	Vibrato Rate	-64--+63	Adjust the vibrato speed (the rate at which the sound is modulated). The sound will be modulated more rapidly for higher settings, and more slowly with lower settings.
DELAY TIME	Vibrato Delay	-64--+63	Adjusts the time delay until the vibrato (sound modulation) effect begins. Higher settings will produce a longer delay time before vibrato begins, while lower settings produce a shorter time.
DEPTH	Vibrato Depth	-64--+63	Adjusts the depth of the vibrato effect (the depth at which the sound is modulated). The sound will be modulated more greatly for higher settings, and less with lower settings.

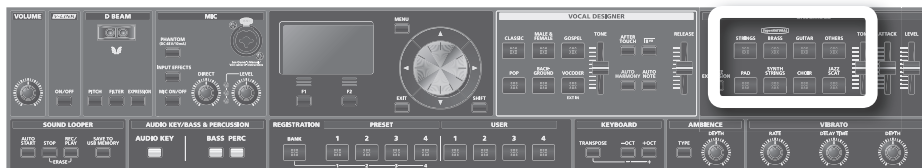
* Vibrato is not applied to the solo strings (Solo Violin, Solo Cello) sounds of the Ensemble part when you play polyphonically (multiple notes). This simulates the way in which vibrato is not applied when multiple notes are played on a violin or similar instrument. Although turning the [VIBRATO] knobs will not apply vibrato, you can apply vibrato by operating the modulation lever (p. 56).

Performing with Ensemble (ENSEMBLE)

Here's how to play the Ensemble part. This part lets you play high-quality sounds from the keyboard. You can switch the sound (e.g., brass ensemble using SuperNATURAL technology, or strings) by selecting a sound button.

Selecting a Sound

Press a button to select a sound.



To play an Ensemble sound, press one of the buttons to make it light. If you press a button that's already lit, it will go dark and the Ensemble part will no longer produce sound.



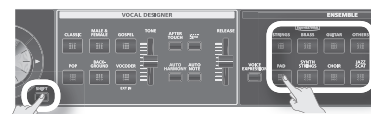
You can simultaneously play more than one part by turning on a sound button for the Vocal Designer and/or Bass & Percussion parts. If you want to hear only the Ensemble part, simply turn off the sound buttons for the other parts so that they are dark.

Sound	Description
STRINGS	Acoustic string sounds with emphasis placed on the performance techniques that are inherent to strings.
BRASS	Brass sounds that use SuperNATURAL technology.
GUITAR	Guitar sounds.
OTHERS	Other sounds.
PAD	Pad sounds.
SYNTH STRINGS	Synthesizer string sounds.
CHOIR	Sampled choir sounds. You can get an even more majestic effect by layering these with one of the sounds of the Vocal Designer part.
JAZZ SCAT	This sound provides samples of jazz scat singing. It's great for songs that contain rapid passages and for scat soloing.

Selecting a Variation Sound

1. Hold down the [SHIFT] button and press a sound button.

A list of sounds will appear in the display.

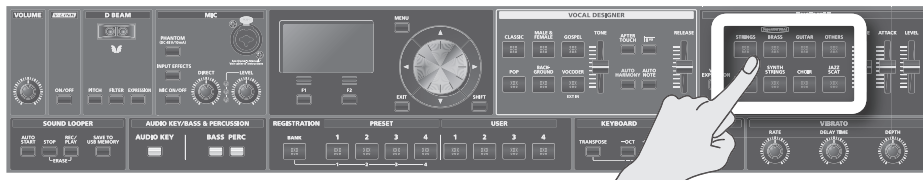


2. Use the value dial or the up/down cursor buttons to select a sound in the list.
3. Press the [F2] (SELECT) button to confirm your choice of sound.

Performing with Ensemble

Now let's try performing with the Ensemble part.

1. Select a sound.



- To ensure that you can clearly hear the sound of the Ensemble part, turn off the sound buttons of the Vocal Designer part and the Audio Key/Bass & Percussion part.
- Raise the Ensemble [LEVEL] slider (p. 44).

2. Play the keyboard.



You'll hear the Ensemble part.

Playing the Ensemble part by itself will give you a wonderful sound, but layering it with the Vocal Designer part will raise this to the level of truly amazing!

For brass ensemble sounds using SuperNATURAL technology, you'll probably want to split the keyboard (p. 54) and use your left hand to play the Vocal Designer while your right hand plays the brass.

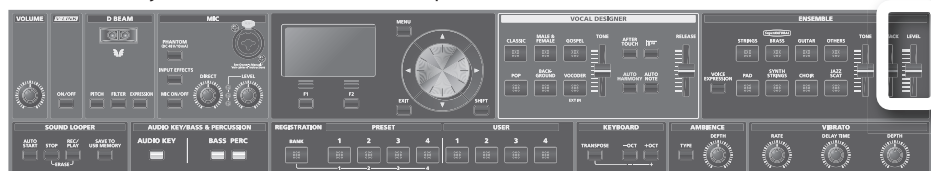
By layering powerful strings or beautiful choir sounds together with Vocal Designer, your performance on the VP-770 can sound unbelievably rich. Vocal Designer will stop sounding when your voice is not being input from the microphone (such as when you take a breath), but the Ensemble part will sound as long as you are playing the keyboard (regardless of the microphone input). Layering the Ensemble part with the Vocal Designer ensures that the sound will not be interrupted.

If You Don't Hear Sound, Check the Following

- Is the VP-770 correctly connected to your amp, speaker, or headphones?
- Is the VP-770's volume raised?
- Is the Ensemble [LEVEL] slider raised?
- Is one of the Ensemble sound buttons lit?

Adjusting the Ensemble Volume (ENSEMBLE LEVEL)

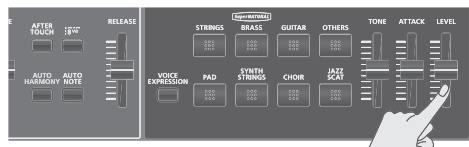
Here's how to adjust the volume of the Ensemble part.



1. Play the keyboard.



2. Move the [LEVEL] slider to adjust the volume.



The level setting is shown in the display while you move the slider.

Unlike the [VOLUME] knob, this slider only affects the Ensemble part. You can use this slider to make adjustments when you want the Ensemble part to be louder (or softer) than the Vocal Designer or the direct output of the microphone (your voice).

Step On a Pedal!

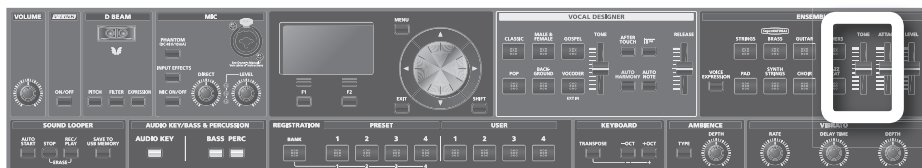
The expression pedal will vary not only the volume of the Ensemble part but also its "tone." This means that using the pedal will make your Ensemble part performance enormously more expressive.

→ For details, refer to "Using pedals" (p. 62).

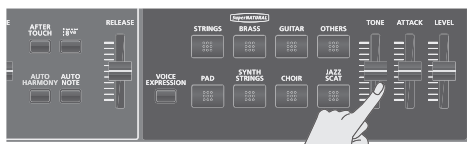


Adjusting the Ensemble Tone (ENSEMBLE TONE)

You can use the [TONE] slider to adjust the tone of the Ensemble sound.



Move the [TONE] slider.



The tone setting is shown in the display while you move the slider.

Moving the slider upward will strengthen the highs, producing a clearer sound.

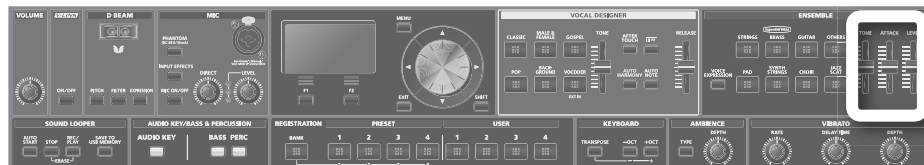
Moving the slider downward will restrain the highs, producing a milder sound.

Setting the slider value to 0 will use the original setting of the selected sound.

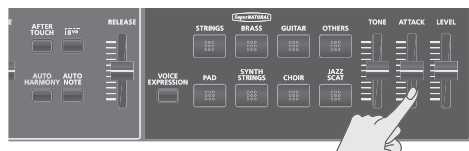
Adjusting the Ensemble Attack (ATTACK)

You can use the [ATTACK] slider to adjust the attack of the Ensemble sound.

The attack is the starting portion of each note. A piano or percussion instrument is said to have a sharp or fast attack; instruments such as bowed strings are said to have a gentle or slow attack.



Move the [ATTACK] slider.



The attack setting is shown in the display while you move the slider.



The [ATTACK] slider applies a relative change to the attack value specified for each sound. When the [ATTACK] slider is at zero, the attack value will be as specified by each sound's own setting.



Setting the attack to a negative value for a BRASS or STRINGS sound will have no effect. The sharpest attack will be when the slider is set to zero.

Moving the slider upward will make the attack more gentle.

Moving the slider downward will make the attack sharper.

You can also adjust the release.

→ For details, refer to "Adjusting the release (RELEASE)" (p. 40).

Using the Microphone to Add Expression to the Ensemble (VOICE EXPRESSION)

You can use your voice via the microphone to add expression to the sound of the Ensemble part.



→ For details, refer to “Using a microphone to control expression (VOICE EXPRESSION)” (p. 66).

About the SuperNATURAL Brass Sounds (BRASS)

The VP-770 uses SuperNATURAL technology to bring you high-quality brass sounds.

Various performance expressions distinctive to brass instruments that were difficult to play from a keyboard can now be reproduced without special operations, and expressively played with realistic tone.

In addition to playing each instrument solo, you can use the Section feature to create and play brass sections consisting of up to six “players.” With this function, the performance of each player in the section will take advantage of the distinctive characteristics of the instrument being used. For details on operation, refer to “Section Mode” (p. 90).



About the String Sounds (STRINGS)

The string sounds of the STRINGS allow even richer and more expressive performance than ever before, without requiring complex operations from the player. The solo strings (Solo Violin, Solo Cello) sounds simulate the characteristics of a solo performance.



The solo strings (Solo Violin, Solo Cello) sounds simulate the way in which a violin or other stringed instrument is actually played, and will naturally switch between the ways in which vibrato or legato are applied when playing monophonically or polyphonically.

Performing with Bass & Percussion (BASS & PERCUSSION)

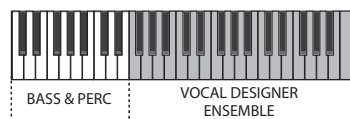
Here's how to play the Bass & Percussion part. The left-most seventeen notes of the keyboard will play bass and voice percussion sounds. This makes it easy to use your left hand to play a bass line while using your right hand to play the melody.

Selecting a sound

Here's how to select a Bass & Percussion sound.



When you press a Bass & Percussion sound button to make it light, the left-most seventeen notes of the keyboard will play bass and percussion sounds.



You can split the keyboard for the Vocal Designer and Ensemble parts (p. 54).

If you press a sound button that is already lit, the button will go dark and the Bass & Percussion part will not produce any sound.



By pressing the [AUDIO KEY] button you can use the same keys to play back audio files from USB memory (p. 68).

Selecting a Variation Sound

1. Hold down the [SHIFT] button and press a sound button.
2. Use the cursor buttons to move the cursor to sound name.



In this screen you can also edit the bass and percussion sound (p. 92).

3. Turn the value dial to select a sound.

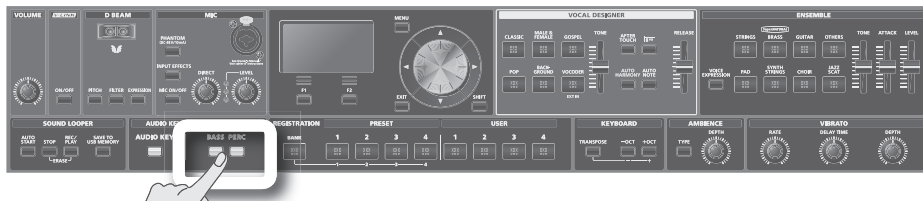
Sound	Description
BASS	Bass sounds.
PERC	This provides a collection of voice percussion sounds.

Press the [EXIT] button to return to the top screen.

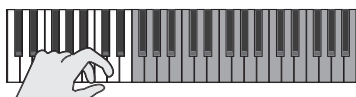
Performing with Bass & Percussion

Now you can try playing the Bass & Percussion part.

1. Select a sound.



2. Play a note in the keyboard region shown below.



The Bass & Percussion part will sound.

The Bass & Percussion part is distinctive in that it splits the keyboard to obtain its own dedicated range of keys. This means that you can use your right hand to play melody or chords while playing a bass line or voice percussion with your left hand.

In other words, you can simulate an entire a cappella group all by yourself!

Adjusting the Bass & Percussion Volume

You can adjust the volume of the Bass & Percussion part.



- 1. Hold down the [SHIFT] button and press a sound button.**

2. Use the cursor buttons to move the cursor to "LEVEL."



3. Turn the value dial to adjust the level.

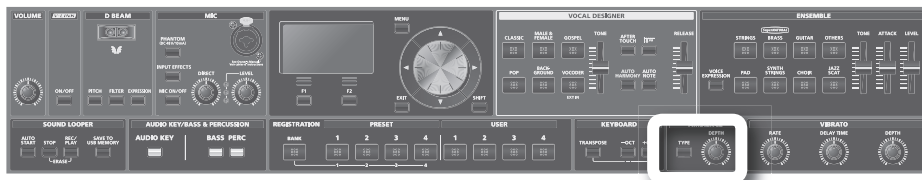
If you want to save the setting, press the [F2] (WRITE) button.

For details on saving, refer to “Saving a registration” (p. 81).

Press the [EXIT] button to return to the top screen.

Adjusting the Ambience (AMBIENCE)

To each part, you can add the acoustic ambience that is typical of a hall or studio.



1. Switch the type of ambience.

Press the [TYPE] button; the display will show the currently selected ambience type. In this state, pressing the [TYPE] button cycles you through the ambience types in this order:

HALL 1 → HALL 2 → STUDIO → OFF → HALL 1

These types have the following characters.



Type	Description
HALL 1	The reverberation of a church.
HALL 2	The reverberation of a large hall.
STUDIO	The reverberation of a studio.
OFF	Turns the ambience off.

2. Adjust the depth of ambience.

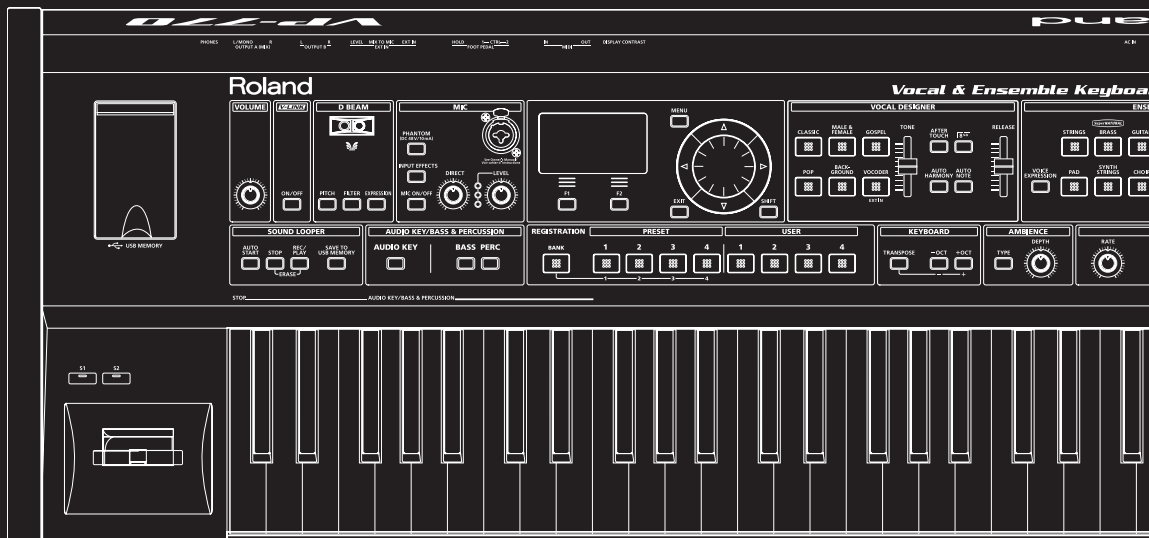
Turn the [DEPTH] knob toward the right to make the ambience deeper.

Turn the [DEPTH] knob toward the left to make the ambience shallower.



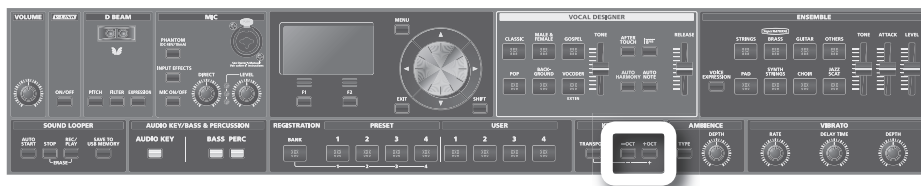
Using Controllers

This section explains keyboard settings and the various controllers provided on the VP-770.



Shifting Octave Up or Down (+OCT/-OCT)

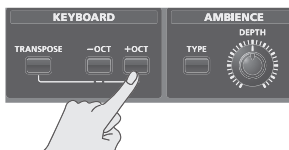
You can shift the keyboard pitch range up or down in a range of ± 3 octaves.



Shifting Upward One Octave

Press the [+OCT] button once; the button will light and the keyboard will be shifted upward one octave.

You can shift up to +3 octaves in this way.

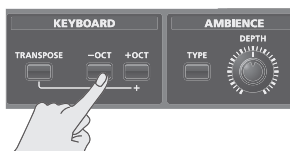


To return the keyboard to its original pitch range, press the [+OCT] and [-OCT] buttons simultaneously.

Shifting Downward One Octave

Press the [-OCT] button once; the button will light and the keyboard will be shifted downward one octave.

You can shift up to -3 octaves in this way.



To return the keyboard to its original pitch range, press the [+OCT] and [-OCT] buttons simultaneously.



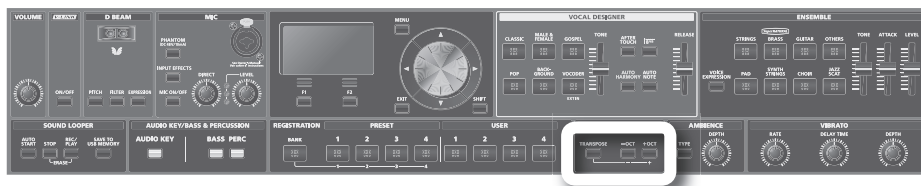
Pressing the [+OCT]/[-OCT] buttons won't change the range of the Bass & Percussion part.



The octave buttons simultaneously change the pitch range of the Vocal Designer and the Ensemble Part. However, by holding down the [SHIFT] button and pressing the [+OCT] or [-OCT] button, you can individually change the pitch range of the Vocal Designer, Ensemble, and Bass & Percussion parts.

Shifting Up or Down by Semitones (TRANPOSE)

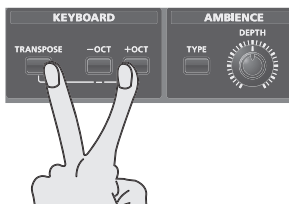
You can shift the keyboard pitch range up or down in semitone steps.



Shifting Upward One Semitone

Hold down the [TRANPOSE] button and press the [+OCT] button once; the button will light and the keyboard will be shifted upward one semitone.

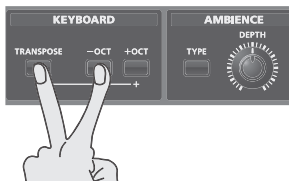
You can shift up to +6 semitones in this way.



Shifting Downward One Semitone

Hold down the [TRANPOSE] button and press the [-OCT] button once; the button will light and the keyboard will be shifted downward one semitone.

You can shift up to -5 semitones in this way.



To return the keyboard to its original pitch range, press the [TRANPOSE] button to turn off its illumination.



Pressing the [TRANPOSE] button won't change the range of the Percussion part.

Splitting the Keyboard Into Vocal Designer and Ensemble Zones (SPLIT)

Here's how to split the keyboard so the Vocal Designer and Ensemble parts can be played from separate zones.

1. Press [F1] (EDIT) button in the top screen.



* With the cursor located on the registration number, press the [F1] (EDIT) button.

* Please be aware that in the screen shots shown in this document, the registration names and tone names differ from the factory settings.

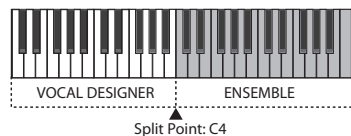
2. Press the cursor buttons to move the cursor to "Split."



3. Turn the value dial to turn "Split" ON.

4. Press the cursor buttons to move the cursor to "Split Point."

If you set the Split Point to "60 (C4)," the keyboard will be divided as follows.



5. Use the value dial to change the value of "Split Point."

6. When you've finished making settings, press the [EXIT] button.



7. If you want to save the edited settings, press the [F2] (WRITE) button to save the registration.

For details on saving, refer to "Saving a Registration" (p. 81).

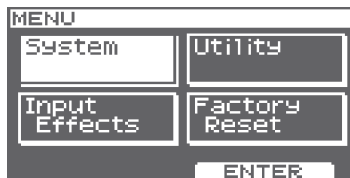


If Split is turned on, the [SPLIT] icon is shown in the top screen.

Adjusting the Keyboard Sensitivity

Here's how to adjust the sensitivity of the keyboard.

1. Press the [MENU] button.



2. Use the value dial to select "System," then press the [F2] (ENTER) button.

3. Use the value dial to select "Control," then press the [F2] (ENTER) button.

4. Use the value dial to select "Keyboard," then press the [F2] (ENTER) button.

5. Use the cursor buttons and the value dial to change the value.



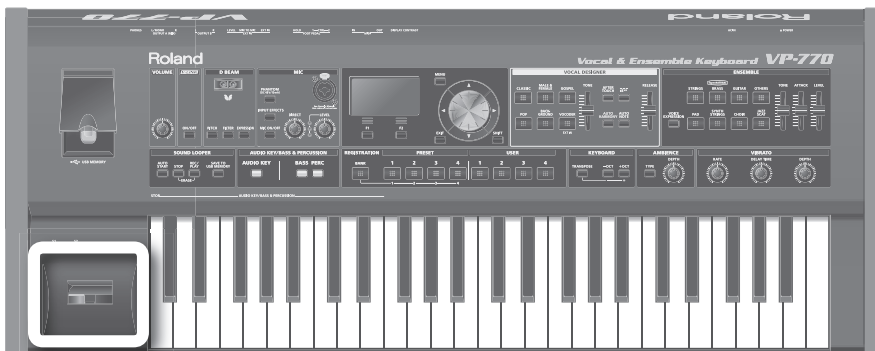
Parameter	Value	Description
Kbd Velo Curve		Adjusts the keyboard's touch.
	LIGHT	Light weight synthesizer keyboard like
	MEDIUM	Standard
	HEAVY	Acoustic piano simulation
Kbd Velo Sens	-63 - +63	Adjusts the sensitivity of the keyboard. As you increase this setting, higher velocity values will be transmitted according to the force with which you play. Normally you will leave this set at "0."

6. If you want to save the edited setting in system memory, press the [F2] (SYS WRITE) button.

7. The confirmation message will appear, then press the [F1] (OK) button.

Using the Pitch Bend / Modulation Lever (PITCH BEND)

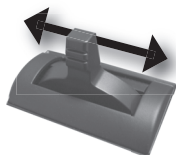
You can vary the pitch or apply vibrato (pitch modulation).



Changing the Pitch in Real Time

You can use the lever to smoothly change the pitch while you perform.

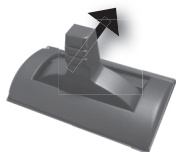
While you play the keyboard, move the lever toward the left to lower the pitch, or toward the right to raise the pitch.



Adding Vibrato

Vibrato is the effect of modulating the pitch.

While you play the keyboard, move the lever away from yourself to apply vibrato.



Adjusting the Pitch Bend Settings

1. Hold down the [SHIFT] button and move the pitch bend lever.


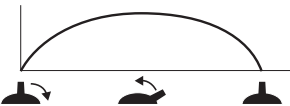
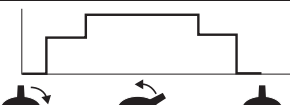
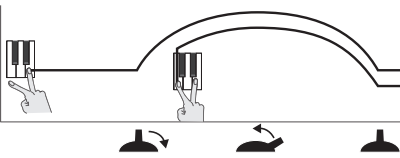
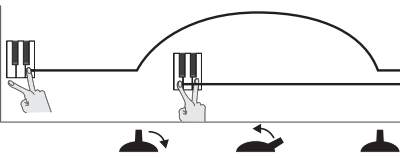
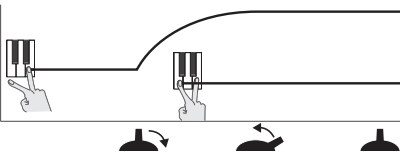
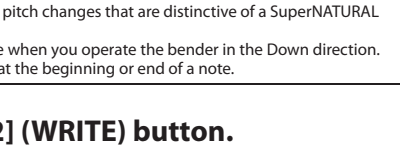
The BENDER SETTINGS screen will appear.

BENDER SETTINGS			
	RANGE	TYPE	MODE
VOC	2	NORMAL	NORMAL
Ens	2	NORMAL	LOCK 1
B&P	(2)		
WRITE			

2. Use the cursor buttons and the value dial to change the value.



Pitch bend settings can be made individually for each part. In the screen, Voc indicates the Vocal Designer setting, Ens indicates the Ensemble setting, and B&P indicates the Bass and Percussion setting. For some sounds, not all items can be set. In this case the value will be shown as "—".

Parameter	Value	Description
RANGE	0–12	Specifies the degree of pitch change in semitones when the Pitch Bend lever is all the way right/left. For example, if this parameter is set to "12," the pitch will rise one octave when the pitch bend lever is moved to the right-most position.  For the SuperNATURAL brass (BRASS) sounds, setting the bend range (RANGE) to 3 or higher will simulate the discontinuous pitch change that is typical of brass instruments, instead of the normal smooth pitch change. When you apply a downward bend, the sound will behave in the manner distinctive of brass instruments, meaning that the volume will also decrease.
TYPE (VOCAL DESIGNER and GUITAR, OTHERS, PAD, SYNTH STRINGS, CHOIR, JAZZ SCAT ENSEMBLE tone only)	NORMAL	The pitch bend lever will operate in the conventional way (movement of the lever will produce smooth changes in pitch). 
	CHROMATIC	The pitch bend lever will change the pitch in semitone steps, simulating the sound of vocal correction software. 
MODE (VOCAL DESIGNER and ENSEMBLE only)	NORMAL	The pitch bend lever will operate in the conventional way. 
	LOCK1	In this mode, pitch bend will not be applied to a new note that is played while the pitch of a previously played note is already being bent. By using this setting in conjunction with playing legato, you can create portamento-like effects. 
	LOCK2	Operation is essentially the same as LOCK1, but there will be no pitch change in response to the pitch bend lever returning. 
	COMBI (BRASS tone only)	This mode allows you to express the subtle pitch changes that are distinctive of a SuperNATURAL brass instrument. The proportion of breath noise will increase when you operate the bender in the Down direction. This lets you freely control the breathiness at the beginning or end of a note. 

3. If you want to save your settings, press the [F2] (WRITE) button.

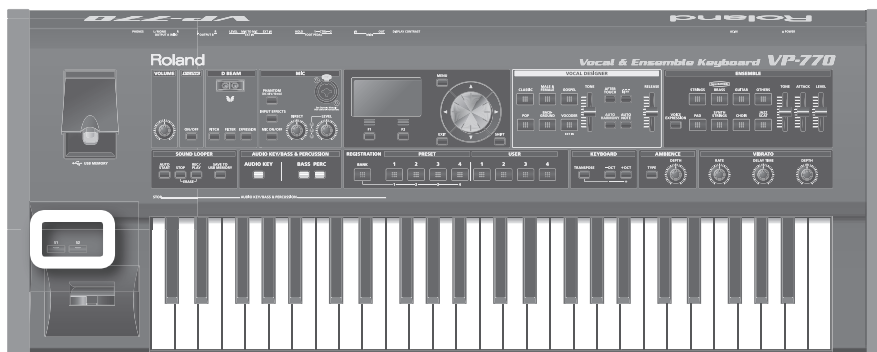
For details on saving, refer to "Saving a Registration" (p. 81).

4. When you've finished making settings, press the [EXIT] button.



Using the [S1]/[S2] Buttons (S1/S2)

You can apply various effects to the sound by pressing the [S1]/[S2] buttons.



While playing the keyboard, press the [S1] or [S2] button.



When you press a button, the display will indicate the parameter that's being controlled by that button, and its value.

If a SuperNATURAL brass or strings sound is selected for the Ensemble part, pressing the [S1] or [S2] button will switch the sound between variations such as staccato, pizzicato, fall, or tremolo, making your performance even more expressive.

Making Assignments for the [S1]/[S2] Buttons

1. Hold down the [SHIFT] button and press the [S1] or [S2] button.

The S1/S2 SETTINGS screen will appear.



2. Use the cursor buttons and the value dial to change the value.



In the screen, Sw1 indicates the [S1] button's assignment, and Sw2 indicates the [S2] button's assignment.

Parameter	Value	Description
Source	REGIST, SYSTEM	The assignments for the [S1]/[S2] buttons can be stored individually in each registration. When you select a different registration, this setting specifies whether the [S1]/[S2] buttons will be given the assignments stored in the registration (REGIST), or the assignments stored in the system settings for the entire VP-770 (SYSTEM).
ASSIGN		Specify the functions that will be controlled by the [S1]/[S2] buttons.
	OFF	Off
	PIZZ/STAC	The pizzicato or staccato sound will be heard (only for supported tones).
	FALL/TREM	The fall or tremolo sound will be heard (only for supported tones).
	UNI/STK	Switches between unison mode and stack mode (only for supported tones).
	DOIT	Applies the doit effect (only for supported tones).
	PORT-ENS	Applies the portamento effect to the Ensemble.
	PORT-VOC	Applies the portamento effect to the Vocal Designer.
	AMB-OFF	Switches the ambience when you press the button.
	DIR-MIC-OFF	Switches the direct microphone when you press the button.
MODE		Turns the [S1]/[S2] buttons function LATCH/MOMENTARY.
	LATCH	The on/off status will alternate each time you press [S1]/[S2] button.
	MOMENTARY	The status will be on only while you hold down [S1]/[S2] button.

3. If you want to save your settings, press the [F2] (WRITE or SYS WRITE) button.

For details on saving your settings, refer to "Saving a Registration" (p. 81) or "Saving the System Settings" (p. 96).

4. When you've finished making settings, press the [EXIT] button.



System Settings and Registrations

The system parameters are a single set of settings that apply in common to the entire VP-770. They include settings such as those for the keyboard sensitivity, master tuning, and MIDI.

Registrations allow you to save settings that select sounds and specify panel settings.

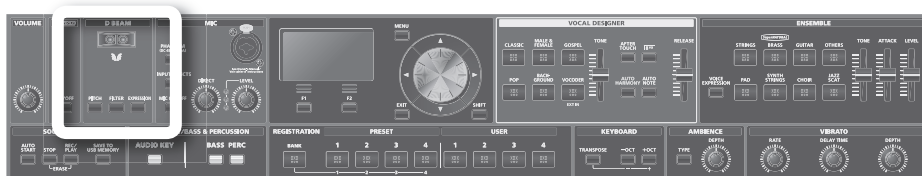
For some controllers (aftertouch, pedal, [S1]/[S2] buttons, D Beam), the settings can be stored either as system settings for the entire VP-770 or for individual registrations.

Use the system parameter "Source" to specify which setting you want to use.

For example, if you want the [S1]/[S2] buttons to always have the same function even when you switch registrations, you should set the Source as "SYSTEM." If you want the [S1]/[S2] buttons to change their function when you switch registrations, set the Source to "REGIST."

Using the D Beam (D BEAM)

By waving your hand above this sensor you can apply a variety of effects to the VP-770's sound.



1. Press a button to select a D Beam effect.



If you press an unlit button, that D Beam effect (see table; p. 61) will be selected.

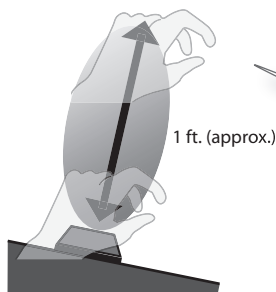
If you press a lit button once again, the D Beam will be turned off.



You can turn on multiple buttons by pressing them simultaneously.

2. While you perform, slowly move your hand up and down over the D BEAM controller.

The effect will be applied when you place your hand over the controller, and will revert to the previous state when you move your hand away. The selected button will blink when the D BEAM controller is responding.



* The sensitivity of the D Beam controller will change depending on the amount of light in the vicinity of the unit. If it does not function as you expect, adjust the sensitivity (D Beam Sens; p. 101) as appropriate for the brightness of your location.

The illustration above shows the effective range of the D BEAM controller. There won't be any effect if you move your hand outside of this range.

D Beam Settings

Here's how to specify the effect obtained when you move your hand above the D Beam sensor, and the depth of that effect.

1. Hold down the [SHIFT] button and press the [PITCH], [FILTER] or [EXPRESSION] button.

The D BEAM SETTINGS screen will appear.



2. Use the cursor buttons and the value dial to change the value.

Parameter	Value	Description
Source	REGIST, SYSTEM	The assignments for the D beam can be stored individually in each registration. When you select a different registration, this setting specifies whether the D beam will be given the assignments stored in the registration (REGIST), or the assignments stored in the system settings for the entire VP-770 (SYSTEM).
DB1 Select DB2 Select DB3 Select	FIX, ASGN	When a D Beam button is on, this setting specifies whether it will perform the function printed on the panel (FIX) or the function assigned by the DB1–3 Asgn settings (ASGN). * You can switch between FIX and ASGN at any time by holding down the D Beam button for several seconds.
DB1 Asgn DB2 Asgn DB3 Asgn		These settings specify the function that will be controlled by the D Beam when DB1–3 Select is set to "ASGN."
	MOD	Applies modulation.
	DYN1	Changes the volume. Transmits MIDI message CC#2 (breath control) to the sound generator section. This is the same operation as Voice Expression (p. 66), and will operate only in the positive (+) direction to increase the volume.
	DYN2	Changes the volume. Transmits MIDI message CC#4 (foot control) to the sound generator section. For STRINGS and BRASS sounds, this allows the volume to be controlled in the \pm directions (it will not go to zero). For other sounds, the volume can be controlled only in the "+" direction.
	EXP	Changes the volume. Transmits MIDI message CC#11 (expression) to the sound generator section. The volume is controlled in a range of 0–127.
	FILTER	Changes the tone.
	WAH	Applies a wah pedal effect to sounds that support Wah.
	PIZZ/STAC	Plays the pizzicato or staccato sound (only for supported tones).
	FALL/TREM	Plays the fall or tremolo sound (only for supported tones).
	UNI/STK	Switches between unison mode and stack mode (only for supported tones).
	DOIT	Applies a doit effect (only for supported tones).
	PORT	Applies a portamento effect.
	PITCH	Changes the pitch.
DB1 Range Lo DB2 Range Lo DB3 Range Lo	0–127	Specifies the depth of the effect when the D Beam controller is not responding. Increasing this value will apply an effect even if the D Beam controller is not responding at all.
DB1 Range Hi DB2 Range Hi DB3 Range Hi	0–127	Specifies the depth of the effect when the D Beam controller is responding to its maximum extent. Reducing this value will reduce the amount of effect produced by the D Beam controller.
DB1 Polarity DB2 Polarity DB3 Polarity	STANDARD, REVERSE	Inverts the change that occurs when you move your hand above the sensor.
DB1 Part DB2 Part DB3 Part		Specifies the part(s) that will be controlled by the D Beam.
	VOC/ENS	Vocal Designer part and Ensemble part.
	VOC	Vocal Designer part only.
	ENS	Ensemble part only.

D Beam Effects

Parameter	Value	PITCH	FILTER	EXPRESSION
Polarity	STANDARD	Lower the pitch (same as moving the pitch bend lever toward the left)	Modify the tone	Reduce the volume
	REVERSE	Raise the pitch (same as moving the pitch bend lever toward the right)	Modify the tone	Increase the volume

* The range of change for PITCH is determined by the Bend Range setting (p. 57).

3. If you want to save your settings, press the [F2] (WRITE or SYS WRITE) button.

For details on saving your settings, refer to "Saving a Registration" (p. 81) or "Saving the System Settings" (p. 96).

4. When you've finished making settings, press the [EXIT] button.

Using Pedals (HOLD PEDAL/CTRL PEDAL)

You can connect a hold pedal (sold separately: DP series) and an expression pedal (sold separately: EV-5) to the VP-770.

If an optional hold pedal (DP series) is connected to the rear panel PEDAL HOLD jack, you can press the hold pedal to cause notes to sustain or “hold” even after their keys have been released. If an optional expression pedal or pedal switch (EV-5, DP series,) is connected to the rear panel PEDAL CTRL jack (1, 2), you can use the pedal to control the volume or various functions.



Holding Notes

While playing the keyboard, press the hold pedal.

The notes will be held while you are pressing the hold pedal.

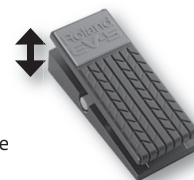


You can change the hold pedal settings by editing the registration’s “Hold Mode” (p. 87, p. 89), “Hold Type” (p. 87), and “Hold Freeze Part” (p. 83) settings.

Adding Expression to Your Performance

While playing the keyboard, raise and lower the expression pedal.

The expression pedal will vary not just the volume of the Ensemble part but also the tonal character.



You can change the pedal settings by editing the system’s polarity settings (Hold Pol, P1 Pol, P2 Pol) (p. 100).

Pedal Settings

Here’s how to edit the pedal-related settings.

- 1. Hold down the [SHIFT] button and press the hold or expression pedal.**

The display will show the edit screen for the pedal you pressed.

- 2. Use the cursor buttons and the value dial to change the value.**



Parameter	Value	Description
Source	REGIST, SYSTEM	The assignments for the pedal can be stored individually in each registration. When you select a different registration, this setting specifies whether the pedal will be given the assignments stored in the registration (REGIST), or the assignments stored in the system settings for the entire VP-770 (SYSTEM).
Hold Part		Specifies the part(s) that will be controlled by the hold pedal.
	VOC/ENS	Vocal Designer part and Ensemble part.
	VOC	Vocal Designer part only.
	ENS	Ensemble part only.
P1 Asgn P2 Asgn		Specifies the function that will be controlled by the control pedal.
	OFF	Off
	MOD	Applies modulation.
	DYN1	Changes the volume. Transmits MIDI message CC#2 (breath control) to the sound generator section. This is the same operation as Voice Expression (p. 66), and will operate only in the positive (+) direction to increase the volume.
	DYN2	Changes the volume. Transmits MIDI message CC#4 (foot control) to the sound generator section. For STRINGS and BRASS sounds, this allows the volume to be controlled in the \pm directions (it will not go to zero). For other sounds, the volume can be controlled only in the "+" direction.
	EXP	Changes the volume. Transmits MIDI message CC#11 (expression) to the sound generator section. The volume is controlled in a range of 0–127.
	FILTER	Changes the tone.
	WAH	Applies a wah pedal effect to sounds that support Wah.
	PIZZ/STAC	Plays the pizzicato or staccato sound (only for supported tones).
	FALL/TREM	Plays the fall or tremolo sound (only for supported tones).
	UNI/STK	Switches between unison mode and stack mode (only for supported tones).
	DOIT	Applies a doit effect (only for supported tones).
	PORT	Applies a portamento effect.
	AMB	Controls the depth of ambience.
	DIR-MIC	Controls the direct microphone volume.
	PROG-UP	Switches to the next registration (Source: SYSTEM only).
	PROG-DOWN	Switches to the previous registration (Source: SYSTEM only).
	PANEL-SW	Performs the operation specified for P1 Sw Asgn/P2 Sw Asgn.
P1 Sw Asgn P2 Sw Asgn		If P1 Asgn/P2 Asgn is set to "PANEL-SW," this specifies the operation that occurs when the control pedal turns on.
	REC/PLAY	Same operation as Sound Looper [REC/PLAY] button. * Rapidly pressing the pedal twice performs the same operation as the [STOP] button.
	STOP	Perform the same operation as Sound Looper [STOP] button.
P1 Part P2 Part		Specifies the part(s) that will be controlled by the control 1/2 pedals.
	VOC/ENS	Vocal Designer part and Ensemble part.
	VOC	Vocal Designer part only.
	ENS	Ensemble part only.

3. If you want to save your settings, press the [F2] (WRITE or SYS WRITE) button.

For details on saving your settings, refer to "Saving a Registration" (p. 81) or "Saving the System Settings" (p. 96).

4. When you've finished making settings, press the [EXIT] button.



Adding an Effect by Applying Pressure to the Keyboard (AFTERTOUCH)

You can add an effect to Vocal Designer by applying pressure (aftertouch) to the keyboard.

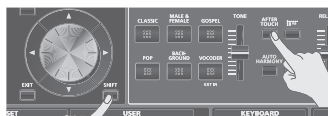


When you press the [AFTERTOUCH] button, the button will light and the aftertouch function will be turned on for Vocal Designer.



Making Aftertouch Settings

1. Hold down the [SHIFT] button and press the [AFTERTOUCH] button.



The AFTERTOUCH SETTINGS screen will appear.



2. Use the cursor buttons and the value dial to change the value.

Parameter	Value	Description
Source	REGIST, SYSTEM	The assignments for the aftertouch can be stored individually in each registration. When you select a different registration, this setting specifies whether the aftertouch will be given the assignments stored in the registration (REGIST), or the assignments stored in the system settings for the entire VP-770 (SYSTEM).
Aft Assign		Specifies the aftertouch effect.
	OFF	Off
	MOD	Applies modulation.
	DYN1	Changes the volume. Transmits MIDI message CC#2 (breath control) to the sound generator section. This is the same operation as Voice Expression (p. 66), and will operate only in the positive (+) direction to increase the volume.
	DYN2	Changes the volume. Transmits MIDI message CC#4 (foot control) to the sound generator section. For STRINGS and BRASS sounds, this allows the volume to be controlled in the \pm directions (it will not go to zero). For other sounds, the volume can be controlled only in the "+" direction.
	FILTER	Changes the tone.
	WAH	Applies a wah effect to sounds that support Wah.
	BEND-DOWN	Lowers the pitch.
	BEND-UP	Raises the pitch.
Aft Part		Specifies the part(s) that will be controlled by aftertouch.
	VOC/ENS	Vocal Designer part and Ensemble Part.
	VOC	Vocal Designer part only.
	ENS	Ensemble part only.
	OFF	Off

3. If you want to save your settings, press the [F2] (WRITE or SYS WRITE) button.

For details on saving your settings, refer to "Saving a Registration" (p. 81) or "Saving the System Settings" (p. 96).

4. When you've finished making settings, press the [EXIT] button.



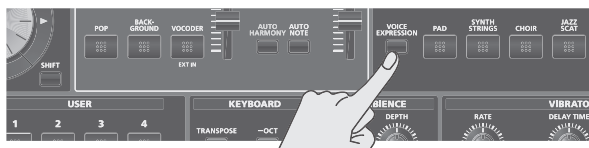
To adjust the aftertouch sensitivity, use the system setting Aft Sens (p. 99).

Using a Microphone to Control Expression (VOICE EXPRESSION)

You can use the loudness of your voice via the microphone to add expression to the Ensemble part.



1. Press the [VOICE EXPRESSION] button to make it light.



- To hear the result as clearly as possible, turn on an Ensemble part sound, and turn off the sound buttons of the Vocal Designer part and the Bass & Percussion part.
- To hear the result as clearly as possible, turn the [DIRECT] knob (which sends your own voice directly from the output) all the way down.

2. Play the keyboard.



3. While continuing to hold down notes, vocalize into the microphone. Try varying the loudness of your voice.

The volume and tone of the Ensemble part will change according to the loudness of your vocalizing.



Adjusting the Voice Expression Sensitivity

1. Hold down the [SHIFT] button and press the [VOICE EXPRESSION] button.

The VOICE EXP SETTINGS screen will appear.

2. Use the value dial to change the value.



Parameter	Value	Description
Voice Exp Sens	0-127	You can adjust the Voice Expression sensitivity. Higher sensitivity settings mean that the Voice Expression effect will begin applying even when your voice is still at a low loudness level. Lower sensitivity settings mean that the Voice Expression effect will begin applying only when your voice reaches a fairly high loudness level. You'll find it easier to control Voice Expression if you set this to a sensitivity that's appropriate for your singing voice.

3. If you want to save your settings, press the [F2] (SYS WRITE) button.

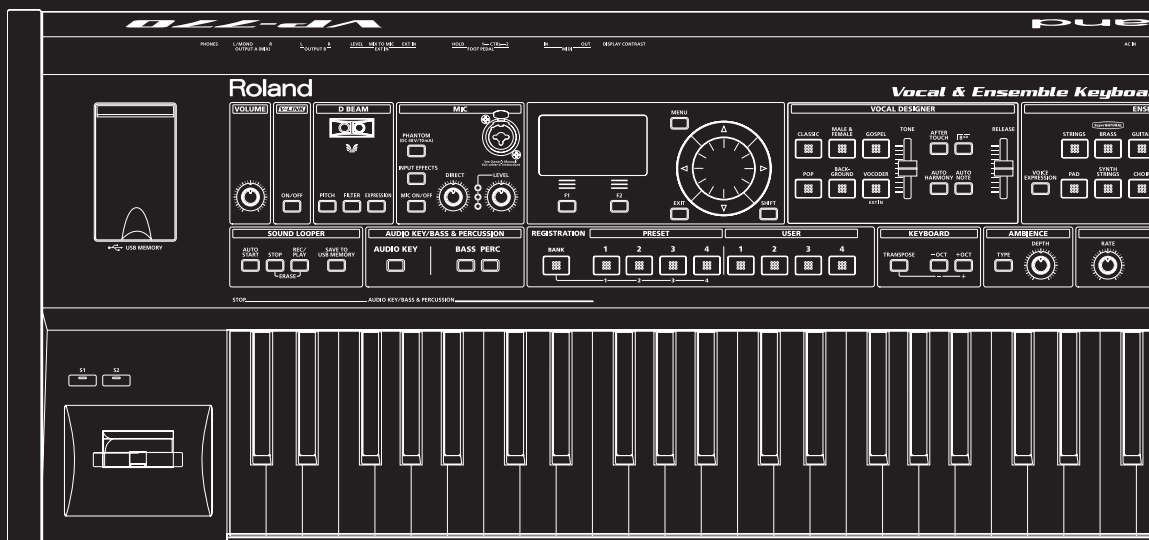
For details on saving, refer to "Saving the System Settings" (p. 96).

4. When you've finished making settings, press the [EXIT] button.

* The Voice Expression effect does not apply to some sounds (GUITAR, OTHERS, and decay-type sounds).

Using Audio Files

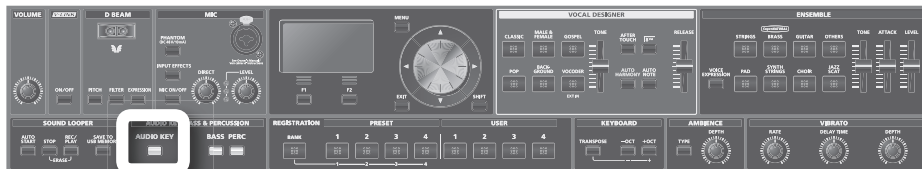
This chapter explains the Audio Key function, which allows audio files saved on USB memory (sold separately) to be assigned to keys for playback; and the Sound Looper function, which lets you layer the phrases you perform and play them back as a loop.



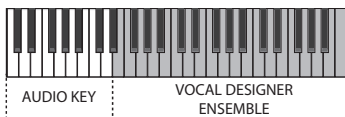
Performing with Audio Files (AUDIO KEY)

*** Never disconnect the USB memory while the Audio Key function is in use.**

The VP-770 lets you play audio files saved on USB memory (sold separately) while you perform. This is called the “Audio Key” function.



The Audio Key function lets you assign audio files to the lowest fifteen keys of the keyboard and play these audio files by pressing the corresponding key. You can assign various phrases to the keys and play them at the appropriate moments during your performance.



You can also specify that an audio file play repeatedly, or reserve the audio file that should be played next. Here are some ways in which you can enjoy using the Audio Key function.

- By switching audio files between sections such as Intro, Theme, Break, and Ending as your song progresses, you can freely change the structure of the song while you perform.
- Assign a different audio song to each key, and use the keyboard to switch songs so you can perform to the accompaniment of an audio song.

For details on the format of the audio files, refer to “Audio Files that can be Played by the VP-770” (p. 73).

Performing with Audio Files from USB Memory

Here’s how you can perform while playing audio files saved on USB memory (sold separately).

Before you begin, install the included “Audio Key Utility 3” into your computer, and prepare the audio file set that you want to play back on the VP-770.

For details, refer to “Audio Key Utility 3 Quick Guide” (separate document).

1. Connect the USB memory containing the audio file set to the USB MEMORY connector (p. 22).



2. Press the [AUDIO KEY] button.

The AUDIO KEY screen will appear.



The Audio Key function will be activated, allowing you to play audio files by pressing a key.

Playback Mode List

Indication	Description
O	One-shot Now When you press the key, the audio file will play only once. The audio file will play immediately when you press the key.
OW	One-shot Wait When you press the key, the audio file will play only once. With this setting, pressing the key while another audio file is playing will reserve the audio file to be played next. When the currently playing audio file has finished, the reserved audio file will play.
L	Loop Now When you press the key, the audio file will play repeatedly. The audio file will play immediately when you press the key.
LW	Loop Wait When you press the key, the audio file will play repeatedly. With this setting, pressing the key while another audio file is playing will reserve the audio file to be played next. When the currently playing audio file has finished, the reserved audio file will play.
STOP	When you press this key, the audio file will stop playing.

* If audio files are not assigned to the C#2–D3 keys, nothing will be shown in the keyboard graphic in the screen.

3. Play a key C#2–D3.

The audio file assigned to the respective key will play.

If a key is assigned to play an audio file, the color of the key in the screen will change. The name and remaining time of the currently playing audio file is also shown in the screen.

Keys set to “OW” or “LW” let you reserve the audio file that will be played when the currently playing audio file has finished playing. Keys for which an audio file is reserved are indicated by a bold border.

4. To stop the file that’s playing, press the C2 key.

Audio file playback will stop.



In the AUDIO KEY screen you can adjust the Audio Key volume by turning the value dial.



For details on installing the included “Audio Key Utility 3” into your computer, refer to “Audio Key Utility 3 Quick Guide” (separate document).



If the connected USB memory does not contain an audio file set created by the “Audio Key Utility 3,” you’ll be able to assign audio files from USB memory to each key and play them. You can also change the settings of the audio files assigned to the keys, and change the settings that specify how the audio files will be repeated (p. 70).

Selecting the Audio File Set

Here's how to select and play an audio file set that's saved in USB memory.

1. **Connect the USB memory containing the audio file set to the USB MEMORY connector (p. 22).**

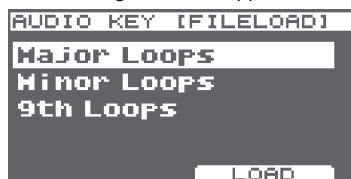
2. **Press the [AUDIO KEY] button.**

The AUDIO KEY screen will appear.



3. **Press the [F2] (SELECT) button.**

The following screen will appear.



If the USB memory does not contain an audio file set that was created using "Audio Key Utility 3," the display will indicate "External Root." Even if the USB memory does not contain an audio file set, audio files located in the root level of the USB memory can be assigned to keys and played.

4. **Use the VALUE dial to select an audio file set, and press the [F2 (LOAD)] button.**
5. **The confirmation message will appear, then press the [F1] (OK) button.**

The file will be loaded into the VP-770.

Changing the Audio File Settings

Here's how you can edit the audio file settings, such as changing the audio file played by each key, or specifying whether the file will be played repeatedly.

1. **As described in "Selecting the Audio File Set" (on the preceding page), load the audio file set that you want to edit.**

The audio file set will be loaded into the VP-770.

2. Press the [F1] (EDIT) button.

The following screen will appear.

Now you can change the audio file that is assigned to each key, and specify how it is to be played (the playback mode).



If the USB memory does not contain an audio file set, the [WRITE] button is not shown in the display.

3. Press the key whose settings you want to change.

The audio file assigned to each key and its playback mode are shown.



4. Use the VALUE dial to select the audio file that will be played by the specified key.

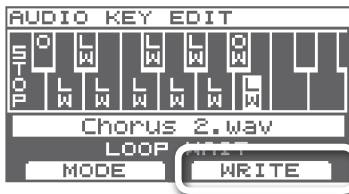
If you select the "No Assign," the audio file assigned to that key will be cleared. No playback mode indication is shown on the graphic for keys to which no audio file is assigned, and the audio file name field will indicate "No Assign."

5. Press the [F1] (MODE) button to select play mode.

The playback mode (p. 69) will change each time you press the [F1] (MODE) button.

6. Repeat steps 3–5 to edit the settings.

7. Press the [F2] (WRITE) button.



The confirmation message will appear.

If you don't want to store the settings, press the [F2] (CANCEL) button.

The operation will be cancelled, and you'll return to the previous screen.

8. Press the [F1] (OK) button to overwrite the settings of the audio file set.

When the settings have been written, the indicators will go out, and you will return to the previous screen.

Adjusting the Volume of the Audio Key

You can adjust the volume when using the Audio Key function.

You can adjust the volume of the Audio Key to change the volume balance between your keyboard performance and the audio file playback.

1. Hold down the [SHIFT] button and press the [AUDIO KEY] button.

The AUDIO KEY LEVEL screen will appear.



2. Press the cursor buttons to move the cursor to "Level."

3. Use the value dial to change the value of "Level."



You can specify the volume in a range of "0–127."



In the same way, you can move the cursor to "Amb Send" and specify the amount of ambience (0–127) that will be applied to the audio key.



In the AUDIO KEY screen you can also change the Audio Key volume by turning the value dial.

Types of Audio Files That the VP-770 Can Play

WAV/AIFF

Sampling Frequency	44.1 kHz
Bit Depth	16-bit
File Extension	".wav" ".aif" ".aiff"

MP3

Format	MPEG-1 audio layer 3
Sampling Frequency	44.1 kHz
Bit Rate	32/40/48/56/64/80/96/112/128/160/192/224/256 /320 kbps, VBR (Variable Bit Rate)
File Extension	".mp3"

Caution when Playing Back Audio Files

An MP3 file has little time of the blank at the head and the end of the file. Therefore, the sound might cut off when an MP3 file played repeatedly with Audio Key function.

If this occurs, you may be able to solve the problem by using WAV/AIFF format data rather than MP3 format data

Recording Loop Phrases (SOUND LOOPER)

You can record a phrase you perform, and play it back repeatedly as a loop. You can also record additional phrases layered onto the recording. When you're using a microphone it may be difficult to hear the sound that is actually being produced, but you can use this looping function to easily audition your output.



- * The recordable time is approximately 18 seconds.
- * You can't change the tempo or time signature of the recorded phrase.
- * You can't record the sound that is output from the OUTPUT B jacks. You'll need to set things up so that the sound you want to record is output from the OUTPUT A (MIX) jacks (p. 4, 98).

Recording a Phrase

Preparations

1. Press the [REC/PLAY] button.

The Sound Looper will enter recording-standby mode, and the [REC/PLAY] button will start blinking. The LOOPER SETUP screen will appear.



You can also access this screen by holding down the [SHIFT] button and pressing the [REC/PLAY] button.

- * If a phrase has already been recorded, recording will start when you press the [REC/PLAY] button. (The LOOPER SETUP screen will not appear.) If you want to record a new phrase, erase the previously-recorded phrase as described in "Erasing the Phrase" (p. 76).


2. Use the cursor buttons and the value dial to make metronome settings for recording and to specify the length that you want to record.



If you leave the [AUTO START] button turned on, recording will start automatically when you begin playing. The [] icon in the level meter indicates the level at which triggering will occur.



If the pedal setting (P1/P2 Assign) is "PANEL-SW," you can perform this operation using the pedal (p. 63).

Parameter	Value	Description
Beat	2/4, 3/4, 4/4, 5/4, 6/4, 7/4, 5/8, 6/8, 7/8, 9/8, 12/8, 9/16, 11/16, 13/16, 15/16, 17/16, 19/16	Specifies the metronome's time signature.
Tempo	25.0–300.0	Specifies the metronome's tempo.
Length	(depends on the tempo)	Specifies the number of measures that will be recorded. You cannot specify a number of measures that would cause the recording time to exceed 18 seconds.
Level	0–127	Specifies the playback volume for the Sound Looper.
Gain	0–+12 [dB]	This adjust the gain of the looper.
Auto Trig Level	1–10	Specify this if you're using Auto Start to initiate recording. Lower values will allow recording to be triggered even by softer sounds. The [] icon in the level meter indicates the level at which triggering will occur.
Metro Mode	OFF	The metronome will not sound.
	PLAY-ONLY	The metronome will sound only while the Sound Looper is playing back.
	REC-ONLY	The metronome will sound only while the Sound Looper is recording.
	PLAY&REC	The metronome will sound while the Sound Looper is playing or recording.
	ALWAYS	The metronome will sound constantly.
Metro Level	0–10	Adjusts the volume of the metronome.
Metro Sound	TYPE1–6	Selects the sound of the metronome. * For details on each value, refer to p. 99.

Starting/Stopping Recording

3. Press the [REC/PLAY] button.

After a one-measure count-in, the [REC/PLAY] button will light red, and recording will start.

After recording has started and the specified number of measures has elapsed, the [REC/PLAY] button will turn green and the Sound Looper will switch to playback.

* The measure setting is invalid if the metronome is turned off (Metro Mode: OFF, PLAY-ONLY).



If you leave the [AUTO START] button turned on, recording will start automatically when you begin playing.

4. To stop recording, press the [STOP] button.

Playing Back the Recorded Phrase

1. Press the [REC/PLAY] button.

The [REC/PLAY] button will turn green, and the phrase will play.

2. To stop playback, press the [STOP] button.

Overdubbing Phrases (Recording Another Layer)

Here's how to record another phrase onto the previously recorded phrase.

1. Press the [REC/PLAY] button.

The [REC/PLAY] button will turn green, and the phrase will play.

2. To begin overdubbing, press the [REC/PLAY] button once again.

The [REC/PLAY] button will turn orange, and the Sound Looper will be in overdubbing mode.

3. To stop playback, press the [STOP] button.



If you press the [REC/PLAY] button, recording will end and the phrase will play.

Erasing the Phrase

1. **Hold down the [STOP] button and press the [REC/PLAY] button.**

The confirmation message will appear.

2. **Press the [F1] (OK) button to erase the phrase.**

If you decide not to erase the phrase, press the [F2] (CANCEL) button.

* You can't recover a phrase that has been erased.

Saving the Phrase to USB Memory

If you save the recorded phrase to USB memory (sold separately), you'll be able to use it with the Audio Key function (p. 68).

1. **Make sure that the phrase is not playing.**
 2. **Press the [SAVE TO USB MEMORY] button.**
- The WRITE FILE NAME screen will appear.
3. **Use the cursor buttons and the value dial to enter a name, and then press the [F2] (WRITE) button.**

For details on assigning names, refer to p. 81.

The confirmation message will appear.

4. **Press the [F1] (OK) button to save the phrase to USB memory.**

When the save is completed, the previous display will reappear.

* It is not possible to load a phrase from USB memory into the Sound Looper.

Adjusting the Volume of the Phrase

1. **Hold down the [SHIFT] button and press the [REC/PLAY] button.**

The LOOPER SETUP screen will appear.

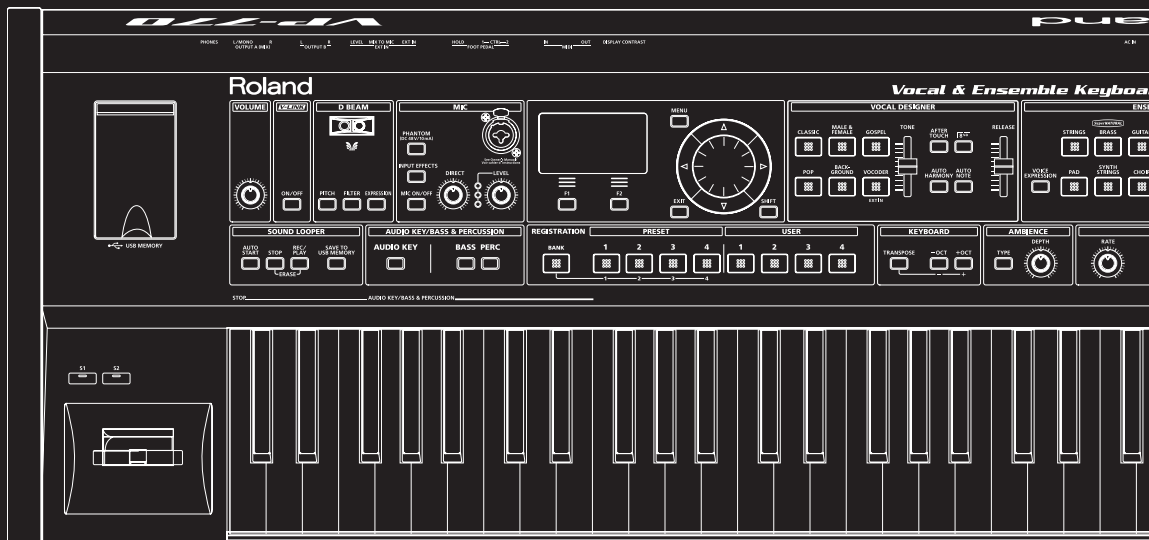


2. **Press the cursor buttons to move the cursor to "Level."**
3. **Use the value dial to change the value of "Level."**

Press the [EXIT] button to return to the top screen.

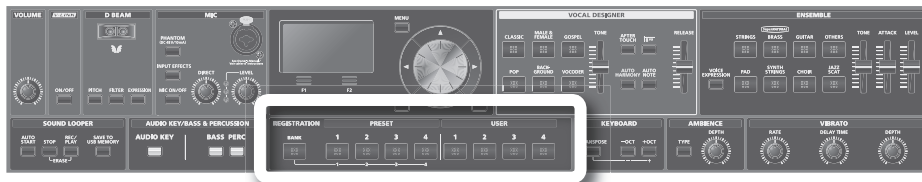
Storing Sounds and Settings (Registration)

Sounds and panel settings can be stored as one of thirty-two “registrations” for instant recall using the eight buttons.



Recalling a Registration (REGISTRATION)

Here's how to recall the VP-770's sounds and panel settings (registrations).

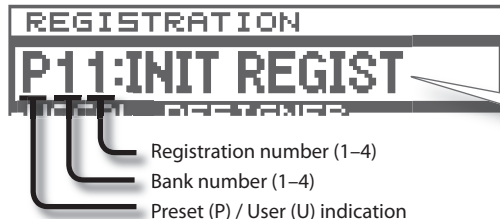


What is a Registration?

A registration is the unit by which the VP-770's sounds and panel settings can be stored. In addition to the sounds and settings for the Vocal Designer, Ensemble, and Bass & Percussion parts, a registration also saves the state of the panel and various other settings.

As shown in the illustration at right, the registrations are organized into four preset buttons and four user buttons, each with four banks. One registration can be stored at each button, and instantly recalled by pressing that button.

The top screen shows the following information



	Preset				User			
	1	2	3	4	1	2	3	4
Bank 1	[P1]	[P2]	[P3]	[P4]	[U1]	[U2]	[U3]	[U4]
Bank 2	[P1]	[P2]	[P3]	[P4]	[U1]	[U2]	[U3]	[U4]
Bank 3	[P1]	[P2]	[P3]	[P4]	[U1]	[U2]	[U3]	[U4]
Bank 4	[P1]	[P2]	[P3]	[P4]	[U1]	[U2]	[U3]	[U4]



You can also select a registration from the top screen by moving the cursor to the registration number and turning the value dial.

*** Please be aware that in the screen shots shown in this document, the registration names and tone names differ from the factory settings.**

Saving a Registration to a Preset

When the VP-770 is in its factory-set condition, you cannot save registrations to the preset buttons. However, by turning off "Preset Protect" (a System setting), as described below, you'll be able to store registrations at the preset buttons as well.

1. Press the [MENU] button.
2. Turn the value dial to select "System," and press the [F2] (ENTER) button.
3. Turn the value dial to select "Sound," and press the [F2] (ENTER) button.
4. Press the [▼] cursor button to move the cursor to "Preset Protect," and then turn the value dial to change the "Preset Protect" setting to "OFF."
5. To save the system setting you just edited, press the [F2] (SYS WRITE) button.
6. When the confirmation screen appears, press the [F1] (OK) button.

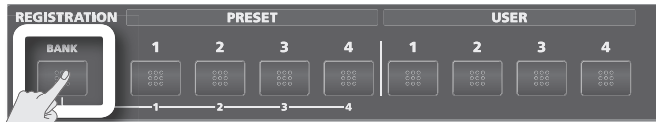


The registration buttons will light red for presets and orange for user registrations. However, if you've disabled Preset Protect, all of the registration buttons will light orange.

Selecting the Registration Bank

There are four registration banks. Press the [BANK] button to switch banks.

1. Press the [BANK] button.



You can press the [EXIT] button or [BANK] button to cancel the bank select procedure.

The [BANK] button and the button for the currently selected bank number (one of [1]–[4]) will light green, and the buttons of the bank numbers that can be selected will blink green.

2. Select the desired bank by pressing a button from [1] through [4].



The bank will be selected, and the registration buttons (PRESET [1]–[4], USER [1]–[4] buttons) will blink. Now you can recall the desired registration as described below.



The registration buttons will light red for presets and orange for user registrations. However, if you've disabled Preset Protect (p. 78), all of the registration buttons will light orange.

Recalling a Registration

1. Press the registration button (PRESET [1]–[4], USER [1]–[4] buttons) for the desired registration.



The button you pressed will light, and the registration will be selected.



By holding down the [SHIFT] button and pressing a [REGISTRATION] button, you can view a list of registrations.

Initializing a Registration

Here's how to initialize the contents of the currently selected registration. "Initialize" means to return the settings of the currently selected registration to a standard set of values.



If you want to return all registrations to their factory-set state, execute the Factory Reset operation (p. 110).

* The currently selected registration will be lost when you initialize the registration.

- 1. Press a [REGISTRATION] button to select the registration that you want to initialize (p. 78).**
- 2. Hold down the [SHIFT] button and press the [F2] (INIT) button.**



The confirmation message will appear.

- 3. Press the [F1] (OK) button at the confirmation screen, and the registration will be initialized.**



When the screen indicates "Completed!", Initialization has been completed.

If you decide not to initialize, press the [EXIT] button to return to the previous screen.

Saving a Registration (REGISTRATION WRITE)

Edits you make to the settings are temporary, and will be lost if you turn off the power or select a different registration (When you edit the registration settings, the “*” symbol will appear in the upper right of the top screen). If you want to keep the modified registration, you must save it.

* When you execute the save operation, the registration that had previously been saved to the save destination will be overwritten and lost. However, the internal factory-set registrations can be recovered by executing the Factory Reset operation.

1. Press the [F2] (WRITE) button.



You can also save the registration by pressing the [F2] (WRITE) button in one of the Vocal Designer, Ensemble, or Bass & Percussion editing screens.

The REGIST NAME screen will appear.

2. Use the cursor buttons and the value dial to enter a name, and then press the [F2] (WRITE) button.



Value dial	Chooses characters.
Cursor left/right	Moves the cursor.
Cursor up/down	Switches between uppercase/lowercase.
[SHIFT]+[F1] (DELETE)	Deletes the character at the cursor, and moves the subsequent characters one place forward.
[SHIFT]+[F2] (INSERT)	Inserts a space at the cursor location.

A screen will appear, allowing you to select the write-destination registration.

3. Use the cursor buttons or the value dial to select the write-destination registration, and then press the [F2] (EXEC) button.



* As the destination of a write, you'll normally only be able to select a user registration (U11–U44). However, if you've disabled Preset Protect (p. 78), all registrations will be available as write destinations.

* You can also select the write destination by using the buttons as described on p. 79.

The confirmation message will appear.

4. At the confirmation screen, press the [F1] (OK) button to save the registration.

When the “Completed!” indication appears, the registration has been saved.

If you decide not to save, press the [EXIT] button to return to the previous screen.

Editing a Registration

Here's the basic procedure for editing a registration.

1. Press a [REGISTRATION] button to select the registration that you want to edit (p. 78).
2. Use the cursor buttons to move the cursor, and then press the [F1] (EDIT) button.



Cursor location	Operation of the EDIT button	Page
Registration number	Makes settings for the entire registration.	p. 83
VOCAL DESIGNER field	Makes settings for the Vocal Designer part.	p. 86
ENSEMBLE field	Makes settings for the Ensemble part.	p. 88



If you want to make settings for the Bass & Percussion part, hold down the [SHIFT] button and press the [BASS] or [PERC] button to access the BASS & PERC EDIT screen (p. 92).

3. Use the cursor buttons to move the cursor to the parameter that you want to edit.



If not all parameters can be shown in a single screen, a scroll bar is shown at the right edge of the screen. In this case, use the cursor [▼] button to scroll the screen downward.



You can access a list of value by holding down the [SHIFT] button and pressing the [F1] (LIST) button in an EDIT screen. From the REGISTRATION EDIT screen, press the [F1] (CONTROL) button to access the REGIST CONTROL (Registration Control settings) screen.

4. Use the value dial to change the value.



You can change the value in steps of one by pressing the cursor buttons [◀] or [▶]. If you want to quickly increase the value, hold down [▶] and press [◀]. Conversely, you can quickly decrease the value by holding down [▶] and pressing [◀]. You can change the value in larger steps by holding down [SHIFT] and pressing [◀] or [▶].

5. Repeat steps 3 and 4 to edit the parameters as desired.
6. If you want to save the changes you made, refer to "Saving a Registration" (p. 81).

Registration Parameters

This section explains the functions the different registration parameters have, as well as the composition of these parameters. For details on how to make settings, refer to “Editing a Registration” (p. 82).

REGISTRATION EDIT

These settings apply to the entire registration.

Parameter	Value	Description
Split	ON, OFF	Turns on the Split function, which divides the keyboard into separate zones for the Vocal Designer and Ensemble parts.
Split Point	36 (C2)–84 (C6)	Specifies the key at which the keyboard is to be divided into separate zones for the Vocal Designer and Ensemble parts.
Hold Freeze Part	OFF, VOC, ENS	The specified part will not receive note-on messages when the Hold pedal is pressed.
Ambience Type	OFF	Turns the ambience off.
	HALL1	The reverberation of a church.
	HALL2	The reverberation of a large hall.
	STUDIO	The reverberation of a studio.
Ambience Depth	0–127	Adjusts the depth of ambience.
Direct Mic Level	0–127	Specifies the direct microphone volume (the audio signal selected by the Input Source (p. 86) setting).
Direct Mic Amb Send	0–127	Specifies the level of the signal that is sent from the direct microphone (the audio signal selected by the Input Source (p. 86) setting) to Ambience.

REGIST CONTROL

Here you can make controller settings for the registration.



In the REGISTRATION EDIT screen, you can press the [F1] (CONTROL) button to access the REGIST CONTROL (Registration Control setting) screen.

REGIST KEYBOARD

Parameter	Value	Description
Aft Assign		Specifies the aftertouch effect.
	OFF	Off
	MOD	Applies modulation.
	DYN1	Changes the volume. Transmits MIDI message CC#2 (breath control) to the sound generator section. This is the same operation as Voice Expression (p. 66), and will operate only in the positive (+) direction to increase the volume.
	DYN2	Changes the volume. Transmits MIDI message CC#4 (foot control) to the sound generator section. For STRINGS and BRASS sounds, this allows the volume to be controlled in the \pm directions (it will not go to zero). For other sounds, the volume can be controlled only in the “+” direction.
	FILTER	Changes the tone.
	WAH	Applies a wah effect to sounds that support Wah.
	BEND-DOWN	Lowers the pitch.
	BEND-UP	Raises the pitch.
Aft Part		Specifies the part(s) that will be controlled by aftertouch.
	VOC/ENS	Vocal Designer part and Ensemble Part.
	VOC	Vocal Designer part only.
	ENS	Ensemble part only.
	OFF	Off

REGIST PEDAL

Parameter	Value	Description
Hold Part		Specifies the part(s) that will be controlled by the hold pedal.
	VOC/ENS	Vocal Designer part and Ensemble part.
	VOC	Vocal Designer part only.
	ENS	Ensemble part only.
P1 Asgn P2 Asgn		Specifies the function that will be controlled by the control pedal.
	OFF	Off
	MOD	Applies modulation.
	DYN1	Changes the volume. Transmits MIDI message CC#2 (breath control) to the sound generator section. This is the same operation as Voice Expression (p. 66), and will operate only in the positive (+) direction to increase the volume.
	DYN2	Changes the volume. Transmits MIDI message CC#4 (foot control) to the sound generator section. For STRINGS and BRASS sounds, this allows the volume to be controlled in the \pm directions (it will not go to zero). For other sounds, the volume can be controlled only in the "+" direction.
	EXP	Changes the volume. Transmits MIDI message CC#11 (expression) to the sound generator section. The volume is controlled in a range of 0–127.
	FILTER	Changes the tone.
	WAH	Applies a wah pedal effect to sounds that support Wah.
	PIZZ/STAC	Plays the pizzicato or staccato sound (only for supported tones).
	FALL/TREM	Plays the fall or tremolo sound (only for supported tones).
	UNI/STK	Switches between unison mode and stack mode (only for supported tones).
	DOIT	Applies a doit effect (only for supported tones).
	PORT	Applies a portamento effect.
	AMB	Controls the depth of ambience.
	DIR-MIC	Controls the direct microphone volume.
	PANEL-SW	Performs the operation specified for P1 Sw Asgn/P2 Sw Asgn.
P1 Sw Asgn P2 Sw Asgn		If P1 Asgn/P2 Asgn is set to "PANEL-SW," this specifies the operation that occurs when the control pedal turns on.
	REC/PLAY	Same operation as Sound Looper [REC/PLAY] button. * Rapidly pressing the pedal twice performs the same operation as the [STOP] button.
	STOP	Perform the same operation as Sound Looper [STOP] button.
P1 Part P2 Part		Specifies the part(s) that will be controlled by the control 1/2 pedals.
	VOC/ENS	Vocal Designer part and Ensemble part.
	VOC	Vocal Designer part only.
	ENS	Ensemble part only.

REGIST S1/S2

Parameter	Value	Description
Sw1 Assign Sw2 Assign		Specify the functions that will be controlled by the [S1]/[S2] buttons.
	OFF	Off
	PIZZ/STAC	The pizzicato or staccato sound will be heard (only for supported tones).
	FALL/TREM	The fall or tremolo sound will be heard (only for supported tones).
	UNI/STK	Switches between unison mode and stack mode (only for supported tones).
	DOIT	Applies the doit effect (only for supported tones).
	PORT-ENS	Applies the portamento effect to the Ensemble.
	PORT-VOC	Applies the portamento effect to the Vocal Designer.
	AMB-OFF	Switches the ambience when you press the button.
	DIR-MIC-OFF	Switches the direct microphone when you press the button.
		Turns the [S1]/[S2] buttons function LATCH/MOMENTARY.
Sw1 Mode Sw2 Mode	LATCH	The on/off status will alternate each time you press [S1]/[S2] button.
	MOMENTARY	The status will be on only while you hold down [S1]/[S2] button.

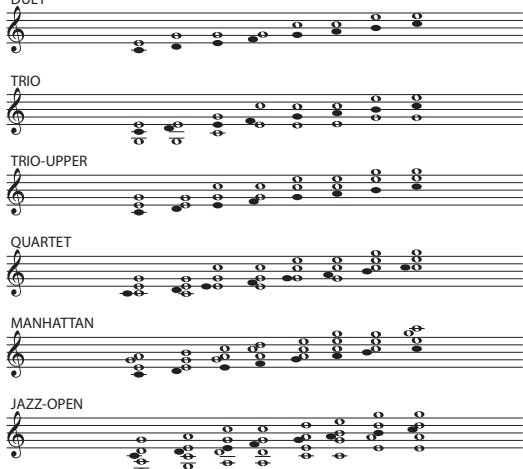
REGIST D BEAM

Parameter	Value	Description
DB1 Select DB2 Select DB3 Select	FIX, ASGN	When a D Beam button is on, this setting specifies whether it will perform the function printed on the panel (FIX) or the function assigned by the DB1–3 Asgn settings (ASGN). * You can switch between FIX and ASGN at any time by holding down the D Beam button for several seconds.
DB1 Asgn DB2 Asgn DB3 Asgn		These settings specify the function that will be controlled by the D Beam when DB1–3 Select is set to "ASGN."
	MOD	Applies modulation.
	DYN1	Changes the volume. Transmits MIDI message CC#2 (breath control) to the sound generator section. This is the same operation as Voice Expression (p. 66), and will operate only in the positive (+) direction to increase the volume.
	DYN2	Changes the volume. Transmits MIDI message CC#4 (foot control) to the sound generator section. For STRINGS and BRASS sounds, this allows the volume to be controlled in the ± directions (it will not go to zero). For other sounds, the volume can be controlled only in the "+" direction.
	EXP	Changes the volume. Transmits MIDI message CC#11 (expression) to the sound generator section. The volume is controlled in a range of 0–127.
	FILTER	Changes the tone.
	WAH	Applies a wah pedal effect to sounds that support Wah.
	PIZZ/STAC	Plays the pizzicato or staccato sound (only for supported tones).
	FALL/TREM	Plays the fall or tremolo sound (only for supported tones).
	UNI/STK	Switches between unison mode and stack mode (only for supported tones).
	DOIT	Applies a doit effect (only for supported tones).
	PORT	Applies a portamento effect.
	PITCH	Changes the pitch.
DB1 Range Lo DB2 Range Lo DB3 Range Lo	0–127	Specifies the depth of the effect when the D Beam controller is not responding. Increasing this value will apply an effect even if the D Beam controller is not responding at all.
DB1 Range Hi DB2 Range Hi DB3 Range Hi	0–127	Specifies the depth of the effect when the D Beam controller is responding to its maximum extent. Reducing this value will reduce the amount of effect produced by the D Beam controller.
DB1 Polarity DB2 Polarity DB3 Polarity	STANDARD, REVERSE	Inverts the change that occurs when you move your hand above the sensor. (For details, refer to the table below, "D Beam Effects.")
DB1 Part DB2 Part DB3 Part		Specifies the part(s) that will be controlled by the D Beam.
	VOC/ENS	Vocal Designer part and Ensemble part.
	VOC	Vocal Designer part only.
	ENS	Ensemble part only.

VOCAL DESIGNER EDIT

Here you can make settings for the Vocal Designer part.

Parameter	Value	Description
Input Source		Selects the modulator (p. 20). The audio signal of the part (AKEY, ENS, LOOPER) selected for Input Source will be sent to the modulator, and therefore will no longer sound in the usual way; however you can play the Input Source directly by raising the [DIRECT] knob.
	MIC-EXT	The audio signal from the mic jack will be used as the modulator. Normally, you can use this setting. By turning on the rear panel [MIX TO MIC] switch, the audio signal from the EXT IN jack can also be used as the modulator.
	AKEY	The audio signal from Audio Key will be used as the modulator. For example, this lets you use Audio Key to play back a wave file containing a vocal, and use that sound to play Vocal Designer.
	ENS	The audio signal from the Ensemble part will be used as the modulator. * The Ensemble part's Ambience Send will be disabled.
	LOOPER	The audio signal from the Sound Looper will be used as the modulator. For example, this lets you play Vocal Designer using a vocal that was recorded into the Sound Looper using direct microphone.
Level	0–127	Specifies the volume of the tone.
Pan	L64–0–63R	Specifies the pan. "L64" is far left, "0" is center, and "63R" is far right.
Dry Send	0–127	Specifies the volume of the part.
Ambience Send	0–127	Specifies the level of the signal sent to the ambience.
Coarse Tune	-12–+12	Adjusts the pitch up or down in semitone steps (+/-1 octave).
Fine Tune	-50–+50	Adjusts the pitch up or down in 1-cent steps (+/-50 cents). One cent is 1/100th of a semitone.
Octave	-3–+3	Adjusts the pitch of the sound up or down in units of an octave (+/-3 octaves).
Tone	-64–+63	Adjusts the tone. Increasing the value will strengthen the highs, producing a clearer sound. Decreasing the value will restrain the highs, producing a milder sound.
Attack	-64–+63	Adjusts the attack. Increasing the value will make the attack more gentle. Decreasing the value will make the attack sharper.
Release	-64–+63	Adjusts the release. Increasing the value will lengthen the time from note-off (releasing the key) until the sound disappears. Decreasing the value will shorten the time from note-off (releasing the key) until the sound disappears.
Vibrato Rate	-64–+63	Adjust the vibrato speed (the rate at which the sound is modulated). The sound will be modulated more rapidly for higher settings, and more slowly with lower settings.
Vibrato Depth	-64–+63	Adjusts the depth of the vibrato effect (the depth at which the sound is modulated). The sound will be modulated more greatly for higher settings, and less with lower settings.
Vibrato Delay	-64–+63	Adjusts the time delay until the vibrato (sound modulation) effect begins. Higher settings will produce a longer delay time before vibrato begins, while lower settings produce a shorter time.
Bend Range	0–12	Specifies the degree of pitch change in semitones when the Pitch Bend lever is all the way right/left. For example, if this parameter is set to "12," the pitch will rise one octave when the pitch bend lever is moved to the right-most position.
Bend Type	NORMAL	The pitch bend lever will operate in the conventional way (movement of the lever will produce smooth changes in pitch).
	CHROMATIC	The pitch bend lever will change the pitch in semitone steps, simulating the sound of vocal correction software.
Bend Mode	NORMAL	The pitch bend lever will operate in the conventional way.
	LOCK1	In this mode, pitch bend will not be applied to a new note that is played while the pitch of a previously played note is already bent. By using this setting in conjunction with playing legato, you can create portamento-like effects.
	LOCK2	Operation is essentially the same as LOCK1, but there will be no pitch change in response to the pitch bend lever returning.

Parameter	Value	Description
Hold Mode	NORMAL	All notes will be sustained if you press the Hold pedal and play the keyboard.
	LEGATO	If you play with the Hold pedal held down, the previous note will disappear the instant you play the next note, producing a legato performance. This makes it easier to play particularly when you're playing chords.
Hold Type	CARR	The Hold pedal will sustain the sound of the carrier (the basis of the sound). If you play the keyboard and then hold down the Hold pedal, you'll be able to perform simply by using the sound from the microphone, without having to keep your hand on the keyboard.
	FORM	The Hold pedal will sustain the sound of the modulator (microphone input). If you hold down the Hold pedal while vocalizing into the microphone, you'll be able to perform simply by playing the keyboard, without having to continue vocalizing. The default setting for the modulator is the microphone input, but you can change this by using the "Input Source" parameter.
	BOTH	The Hold pedal will sustain the sounds of both the carrier and the modulator.
Portamento	ON, OFF	Specifies whether the portamento effect will be applied (ON) or not (OFF). Portamento is an effect which smoothly changes the pitch from the first-played key to the next-played key. By applying portamento, you can simulate slide performance techniques on a violin or similar instrument.
Portamento Time	0–127	Specifies the time over which the pitch will change when you play portamento. Increasing the value will lengthen the time over which the pitch moves to the next note.
8va	ON, OFF	Specifies the state of the [8va] button. If this is ON, the range of the Vocal Designer part will be raised by one octave.
Auto Harmony Sw	ON, OFF	Turns the Auto Harmony function on/off. The Auto Harmony function lets you automatically add a backing chorus to your vocal. This function generates harmony based on the melody you sing (the pitch detected from the microphone) and the chords detected from the keyboard. In addition, the harmony will change according to the movement of the melody you sing.
Harmony Type	DUET, TRIO, TRIO-UPPER, QUARTET, MANHATTAN, JAZZ-OPEN	<p>Switches the type of Auto Harmony.</p> <p>The notation shown below is an example of a C-major scale.</p> <ul style="list-style-type: none"> The solid black notes indicate the pitch detected from the microphone (this note will not sound *1). The white notes indicate the harmony that was generated (Vocal Designer will sound with these notes). For a minor chord, the third will be a minor third rather than a major third.  <p>*1 You can sound the black notes by turning on the [AUTO NOTE] button.</p>
Auto Note Sw	ON, OFF	Turns the Auto Note function on. Normally, Vocal Designer will not sound unless you play the keyboard. However, by using the Auto Note function, you can make Vocal Designer produce sound without your having to play the keyboard; i.e., all you'll need to do is vocalize into the microphone. The Auto Note function will detect the pitch of your voice via the microphone, and automatically sound notes for that pitch.

Parameter	Value	Description
At Note Mode	CHROMATIC	This is a chromatic scale. The pitch detected from the microphone is converted to notes at semitone intervals.
	DIATONIC	This is a diatonic scale. The pitch detected from the microphone is converted to notes at diatonic intervals. You can use the At Note Key parameter to specify the key of the scale.
At Note Key	C, C#, D, D#, E, F, F#, G, G#, A, A#, B	Specifies the key when At Note Mode is set to "DIATONIC" (diatonic scale).
Note Priority		Specifies the priority with which notes will sound when you hold down more than one key when playing a monophonic sound. * Monophonic sounds are sounds that always produce only one note even when you press multiple keys. It is not possible for the user to specify the mono/poly setting.
	NORMAL	If you play multiple keys with a monophonic sound, the last-played key will sound.
	TOP	If you play multiple keys with a monophonic sound, the highest key will sound.

ENSEMBLE EDIT

Here you can make settings for the Ensemble part.


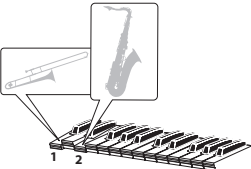
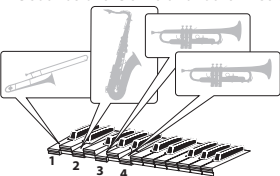
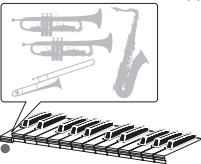
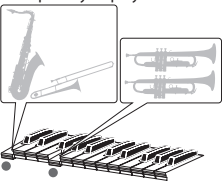
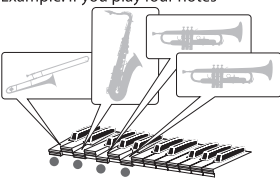
Parameter	Value	Description
Level	0–127	Specifies the volume of the tone.
Pan	L64–0–63R	Specifies the pan. "L64" is far left, "0" is center, and "63R" is far right.
Dry Send	0–127	Specifies the volume of the part.
Ambience Send	0–127	Specifies the level of the signal sent to the ambience.
Coarse Tune	-12–+12	Adjusts the pitch up or down in semitone steps (+/-1 octave).
Fine Tune	-50–+50	Adjusts the pitch up or down in 1-cent steps (+/-50 cents). One cent is 1/100th of a semitone.
Octave	-3–+3	Adjusts the pitch of the sound up or down in units of an octave (+/-3 octaves).
Tone	-64–+63	Adjusts the tone. Increasing the value will strengthen the highs, producing a clearer sound. Decreasing the value will restrain the highs, producing a milder sound.
Attack	-64–+63	Adjusts the attack. Increasing the value will make the attack more gentle. Decreasing the value will make the attack sharper. * Setting the attack to a negative value for a BRASS or STRINGS sound will have no effect. The sharpest attack will be when the slider is set to zero.
Release	-64–+63	Adjusts the release. Increasing the value will lengthen the time from note-off (releasing the key) until the sound disappears. Decreasing the value will shorten the time from note-off (releasing the key) until the sound disappears.
Vibrato Rate	-64–+63	Adjust the vibrato speed (the rate at which the sound is modulated). The sound will be modulated more rapidly for higher settings, and more slowly with lower settings.
Vibrato Depth	-64–+63	Adjusts the depth of the vibrato effect (the depth at which the sound is modulated). The sound will be modulated more greatly for higher settings, and less with lower settings.
Vibrato Delay	-64–+63	Adjusts the time delay until the vibrato (sound modulation) effect begins. Higher settings will produce a longer delay time before vibrato begins, while lower settings produce a shorter time.
Bend Range	0–12	Specifies the degree of pitch change in semitones when the Pitch Bend lever is all the way right/left. For example, if this parameter is set to "12," the pitch will rise one octave when the pitch bend lever is moved to the right-most position.

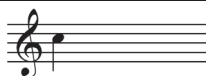
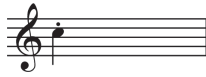


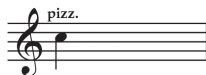
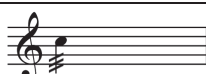


For the SuperNATURAL brass (BRASS) sounds, setting the bend range (RANGE) to 3 or higher will simulate the discontinuous pitch change that is typical of brass instruments, instead of the normal smooth pitch change. When you apply a downward bend, the sound will behave in the manner distinctive of brass instruments, meaning that the volume will also decrease.

Parameter	Value	Description
Bend Type (GUITAR, OTHERS, PAD, SYNTH STRINGS, CHOIR, JAZZ SCAT tone only)	NORMAL	The pitch bend lever will operate in the conventional way (movement of the lever will produce smooth changes in pitch).
	CHROMATIC	The pitch bend lever will change the pitch in semitone steps, simulating the sound of vocal correction software.
Bend Mode	NORMAL	The pitch bend lever will operate in the conventional way.
	LOCK1	In this mode, pitch bend will not be applied to a new note that is played while the pitch of a previously played note is already being bent. By using this setting in conjunction with playing legato, you can create portamento-like effects.
	LOCK2	Operation is essentially the same as LOCK1, but there will be no pitch change in response to the pitch bend lever returning.
	COMBI (BRASS tone only)	This mode allows you to express the subtle pitch changes that are distinctive of a SuperNATURAL brass instrument. The proportion of breath noise will increase when you operate the bender in the Down direction. This lets you freely control the breathiness at the beginning or end of a note.
Hold Mode (BRASS SECTION *1, STRING SECTION *1, GUITAR, OTHERS, PAD, SYNTH STRINGS, CHOIR, JAZZ SCAT tone only)	NORMAL	All sounds will be sustained when you hold down the Hold pedal and play the keyboard. At this time, the "Auto Dynamics" (p. 91) effect will apply to STRINGS SECTION *1 sounds.
	LEGATO	If you play with the Hold pedal held down, the previous note will disappear the instant you play the next note, producing a legato performance. This makes it easier to play, particularly when you're playing chords. At this time, the "Auto Dynamics" (p. 91) effect will apply to STRINGS SECTION *1 sounds.
	ACCOMP (BRASS SECTION *1, STRING SECTION *1 tone only)	A sostenuto-like effect will be applied when you play the keyboard and press the Hold pedal. For STRINGS SECTION *1 sounds, the volume will decrease slightly when you press the pedal. If you release the pedal while continuing to hold the keys, the volume will return to its previous level. Since the volume will not change for notes played after pressing the pedal, this is a convenient way to emphasize the melody while slightly reducing the volume of the accompaniment.
Portamento	ON, OFF	Specifies whether the portamento effect will be applied (ON) or not (OFF). Portamento is an effect which smoothly changes the pitch from the first-played key to the next-played key. By applying portamento, you can simulate slide performance techniques on a violin or similar instrument.
Auto Portamento (BRASS tone only)	ON, OFF	Portamento will automatically be added when you play rapid legato phrases.
Portamento Time (GUITAR, OTHERS, PAD, SYNTH STRINGS, CHOIR, JAZZ SCAT tone only)	0–127	When portamento is used, this specifies the time over which the pitch will change. Higher settings will cause the pitch change to the next note to take more time.

*1 For the BRASS SECTION and STRING SECTION sounds, refer to the separate "VP-770 Sound List."

Parameter	Value	Description
Section Mode (BRASS SECTION *1 tone only)	STACK	<p>Stack Mode This allows you to successively layer each instrument in the order you've specified "Playing settings (Section Style screen)" (p. 29). Using this mode allows you to simulate the bell tones played by a brass ensemble.</p> <p>When you play single notes Only the first instrument will sound.</p>  <p>When you play a second note as well... The first instrument will continue sounding, and the second instrument will be added.</p>  <p>When you additionally play a third and fourth note... The sounds of the third and fourth instrument will be successively layered.</p> 
	UNISON	<p>Unison Mode When you play a single key or multiple keys simultaneously with a four-player ensemble setting, the various instruments will be assigned as follows.</p> <p>When you play single notes All assigned instruments will sound at the same pitch. Each instrument will sound in an octave that's appropriate for it.</p>  <p>When you play multiple notes simultaneously Each instrument will automatically be assigned to a note you play. Units of instruments automatically assigned to a note you play are called a group.</p> <p>Example: If you play two notes</p>  <p>Example: If you play four notes</p> 

Parameter	Value	Description	
Uni Key Shift (BRASS SECTION *1 tone only)	NONE	All brass sounds of the brass section will be played by the same key (pitch).	
	FIXED	Each brass sound will be played by the specified key.	
	AUTO	Sounds will be played by the key specified for each brass sound only when playing single notes in Unison mode.	
Auto Dynamics (STRING SECTION *1 tone only)	0–127	This allows string-like expression to be played by adjusting the timing and speed at which you take your finger off the key. The volume will swell slightly when you take your finger off the key while holding down the Hold pedal. The sound will swell more greatly if you release your finger slowly. The change will be greater for higher settings of this parameter value. This is valid when the Hold Mode setting is “NORMAL” or “LEGATO.”	
Section Size (STRING SECTION *1 tone only)	0–127	Specifies the size of the string section. Higher values will simulate a larger section. This can be set in a range from a string ensemble of a few members up to a full orchestra.	
Variation (BRASS, STRINGS tone only)	NORMAL	The normal sound will be heard.	
	STACCATO (BRASS tone only)	The staccato sound will be heard.	
	FALL (BRASS tone only)	The fall sound will be heard.	
	DOIT (BRASS tone only)	The doit sound will be heard.	
	PIZZICATO (STRINGS tone only)	The pizzicato sound will be heard.	
	TREMOLO (STRING SECTION *1 tone only)	The tremolo sound will be heard.	
Reverb Switch (BRASS, STRINGS tone only)	ON, OFF	Turns on/off the reverb that is applied only to brass and string sounds. * The brass and string sounds have their own reverb effect that is separate from the ambience that is applied to the overall sound of the VP-770.	
EQ Switch (BRASS, STRINGS tone only)	BYPASS	Turns the equalizer off.	
	ON	Turns the equalizer on.	
EQ Lo Freq (BRASS, STRINGS tone only)	200, 400 Hz	Specifies the center frequency at which the low-frequency range will be adjusted.	
EQ Lo Gain (BRASS, STRINGS tone only)	-15 –+15 dB	Specifies the gain (amount of boost or cut) for the low-frequency range.	
EQ Hi Freq (BRASS, STRINGS tone only)	2000, 4000, 8000 Hz	Specifies the center frequency at which the high-frequency range will be adjusted.	
EQ Hi Gain (BRASS SECTION, SOLO BRASS, STRING SECTION, SOLO STRINGS tone only)	-15 –+15 dB	Specifies the gain (amount of boost or cut) for the high-frequency range.	

*1 For the BRASS SECTION and STRING SECTION sounds, refer to the separate "VP-770 Sound List."

BASS & PERC EDIT

Here you can make settings for the Bass and Percussion parts.



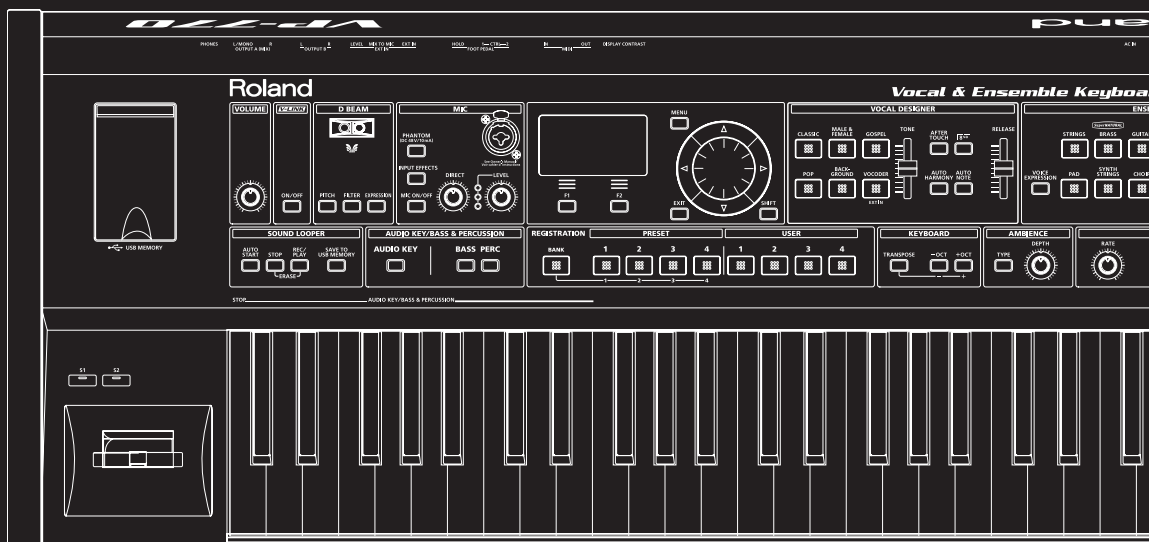
To access this screen, hold down the [SHIFT] button and press the [BASS] or [PERC] button.

Parameter	Value	Description
Level	0–127	Specifies the volume of the tone.
Pan	L64–0–63R	Specifies the pan. "L64" is far left, "0" is center, and "63R" is far right.
Dry Send	0–127	Specifies the volume of the part.
Ambience Send	0–127	Specifies the level of the signal sent to the ambience.
Coarse Tune	-12–+12	Adjusts the pitch up or down in semitone steps (+/-1 octave).
Fine Tune	-50–+50	Adjusts the pitch up or down in 1-cent steps (+/-50 cents). One cent is 1/100th of a semitone.
Octave	-3–+3	Adjusts the pitch of the sound up or down in units of an octave (+/-3 octaves).
Bend Range	0–12	Specifies the degree of pitch change in semitones when the Pitch Bend lever is all the way right/left. For example, if this parameter is set to "12," the pitch will rise one octave when the pitch bend lever is moved to the right-most position.

Menu Reference

This chapter explains what you can do by pressing the [MENU] button.

- “System” lets you make settings that apply to the entire VP-770, such as tuning and MIDI.
- “Input Effect” lets you make settings for the effect that’s applied to the microphone input.
- “Utility” lets you back up the settings of the VP-770.
- “Factory Reset” lets you reset the VP-770 to its factory-set state.



Basic Menu Operation (MENU)

The menu contains four groups of functions that will help you use the VP-770 more efficiently. Here is the basic procedure for using the various menu functions.



1. Press the [MENU] button.



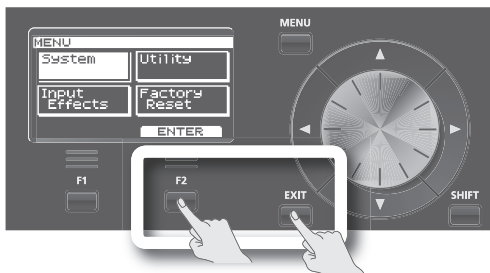
The MENU screen will appear.

2. Use the cursor buttons or the value dial to select menu.



Menu	Description	Page
System	Make settings that apply to the entire VP-770, such as tuning and MIDI.	p. 95
Input Effects	Make settings for the effect that's applied to the mic input.	p. 102
Utility	Back up the VP-770's settings, and make settings for the screensaver.	p. 103
Factory Reset	Reset the VP-770 to its factory-set state.	p. 110

3. Press the [F2] (ENTER) button to proceed to the selected screen. Pressing the [EXIT] button will return you to the previous screen.



System Settings (SYSTEM)

“System settings” refer to settings that apply to the entire VP-770, such as those for tuning and MIDI message reception. Here we’ll explain the procedure for making system settings and what each system parameter does.

1. Press the [MENU] button to access the MENU screen.
2. Use the cursor buttons or the value dial to select “System,” then press the [F2] (ENTER) button.

The SYSTEM screen will appear.

3. Use the cursor buttons or the value dial to select menu, then press the [F2] (ENTER) button.



The parameters are organized into several edit groups.

Menu	Description	Page
MIDI	Makes settings related to MIDI input/output.	p. 97
Sound	Makes settings related to sound output.	p. 98
Metronome	Makes metronome-related settings.	p. 98
Control	Makes settings for controllers such as the pedals and D Beam.	p. 99

4. Use the cursor buttons to move the cursor to the parameter that you want to edit.



If not all parameters can be shown in a single screen, a scroll bar is shown at the right edge of the screen. In this case, use the cursor [▼] button to scroll the screen downward.

5. Use the value dial to change the value.



You can change the value in steps of one by pressing the cursor buttons [◀] or [▶]. If you want to quickly increase the value, hold down [▶] and press [◀]. Conversely, you can quickly decrease the value by holding down [▶] and pressing [◀]. You can change the value in larger steps by holding down [SHIFT] and pressing [◀] or [▶].

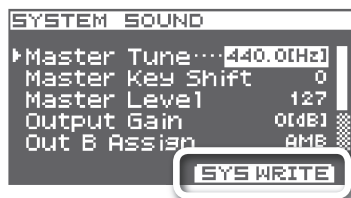
6. Repeat steps 3–5 to edit the parameters as desired.
7. If you want to save the changes you made, refer to “Saving the System Settings” (p. 96).

Saving the System Settings (SYSTEM WRITE)

Changes you make to the System function settings are only temporary—they will be discarded as soon as the power is turned off. If you want to keep any changes you've made in the system settings, you must save them in internal system memory.

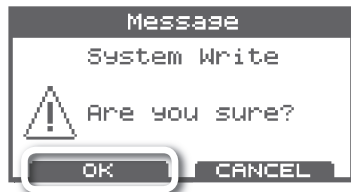
* When you perform the save procedure, the data that previously occupied the save destination will be lost. However, the factory setting data can be recovered by performing the Factory Reset procedure.

1. Change the system function settings, and press the [F2] (SYS WRITE) button.



The confirmation message will appear.

2. Press the [F1] (OK) button in the confirmation screen to save your settings.



Once the settings have been saved, "Completed!" will appear in the screen.

If you decide not to save the settings, press the [EXIT] button to return to the previous screen.

System Parameters

This section explains the functions the different system parameters have, as well as the composition of these parameters.

For details on how to make settings, refer to “System Settings” (p. 95).

SYSTEM MIDI

Here you can make settings for MIDI transmission and reception.

Parameter	Value	Description
Regist Ctrl Ch	Ch1–Ch16, OFF	Registration Control Channel selects the MIDI receive channel used during switching of registrations when MIDI messages (Program Change/Bank Select) are sent from an external MIDI device. Set this to “OFF” if registrations are not to be switched from an external MIDI device.
Rx Program Change	ON, OFF	Specifies whether Program Change messages will be received (ON) or not (OFF).
Rx Bank Select	ON, OFF	Specifies whether Bank Select messages will be received (ON) or not (OFF).
Rx Control Change	ON, OFF	Specifies whether Control Change messages will be received (ON) or not (OFF).
Rx SysEx	ON, OFF	Specifies whether System Exclusive messages will be received (ON) or not (OFF).
Ens Rx Ch	Ch1–Ch16	Specifies the receive channel on which the Ensemble part will receive MIDI messages.
Voc Rx Ch	Ch1–Ch16	Specifies the receive channel on which the Vocal Designer part will receive MIDI messages.
B&P Rx Ch	Ch1–Ch16	Specifies the receive channel on which the Bass & Percussion parts will receive MIDI messages.
Tx Edit	ON, OFF	Specifies whether changes you make to the settings of each part will be transmitted as system exclusive messages (ON) or not transmitted (OFF).
Tx Program Change	ON, OFF	Specifies whether Program Change messages will be transmitted (ON) or not (OFF).
Tx Bank Select	ON, OFF	Specifies whether Bank Select messages will be transmitted (ON) or not (OFF).
Local Sw	ON, OFF	Specifies whether the VP-770's keyboard will play the sounds of each of the VP-770's parts (ON) or will not play them (OFF). Normally, you can leave this ON. Performance data from the VP-770's keyboard will be sent to each of the VP-770's parts and transmitted from the MIDI OUT connector. If you have connected an external MIDI sequencer, the MIDI messages transmitted from the MIDI OUT connector will be routed through your MIDI sequencer and returned to the VP-770's MIDI IN connector. This can create problems, such as duplicate MIDI messages being received, which causes each of the VP-770's parts to sound every note twice. In this situation, you can turn the Local Sw setting OFF so that the performance data from the keyboard will not play the parts.
Tx Active Sens	ON, OFF	Specifies whether Active Sensing messages will be transmitted (ON) or not (OFF).
Soft Through	ON, OFF	Thru function re-transmits all messages received at the MIDI IN connector to the MIDI OUT connector without modifying them in any way.
Device ID	17–32	When you want to transmit or receive System Exclusive messages, set this parameter to match the Device ID number of the other MIDI device.
SysEx Protect	ON, OFF	This prevents the settings of user memory from being rewritten by system exclusive messages transmitted by an external MIDI device. The “ON” setting prevents rewriting, and the “OFF” setting allows rewriting.

SYSTEM SOUND

Here you can make sound-related settings.

Parameter	Value	Description
Master Tune	415.3–466.2 (Hz)	Adjusts the overall tuning of the VP-770. The display shows the frequency of the A4 note (center A).
Master Key Shift	-24+24	Shifts the overall pitch of the VP-770 in semitone steps.
Master Level	0–127	Adjusts the volume of the entire VP-770.
Output Gain	-12+12 (dB)	This adjusts the output gain from the VP-770's Analog Out and Digital Out. When, for example, there are relatively few voices being sounded, boosting the output gain can let you attain the most suitable output level for recording and other purposes.
Out B Assign		Selects the audio signals that will be sent from the rear panel OUTPUT B jacks.
	AMB	Sound output from the OUTPUT A jacks Direct sound (Vocal Designer, Ensemble, Bass & Percussion, Audio Key, Sound Looper) Sound output from the OUTPUT B jacks Ambience component (Vocal Designer, Ensemble, Bass & Percussion, Audio Key)
	ENS	Sound output from the OUTPUT A jacks Vocal Designer, Bass & Percussion, Audio Key, Sound Looper, ambience component (Vocal Designer, Bass & Percussion, Audio Key) Sound output from the OUTPUT B jacks Ensemble
	AKEY	Sound output from the OUTPUT A jacks Vocal Designer, Ensemble, Bass & Percussion, ambience component (Vocal Designer, Ensemble, Bass & Percussion) Sound output from the OUTPUT B jacks Audio Key, Sound Looper
AudioKey Level	0–127	Specifies the volume of the AudioKey.
AudioKey Amb Send	0–127	Specifies the level of the signal sent to the ambience for the AudioKey.
Voice Exp Sens	0–127	You can adjust the sensitivity at which the Voice Expression (p. 66) effect will begin applying in response to changes in microphone input loudness over. Higher sensitivity settings mean that the Voice Expression effect will begin applying even when your voice is still at a low loudness level. Lower sensitivity settings mean that the Voice Expression effect will begin applying only when your voice reaches a fairly high loudness level. You'll find it easier to control Voice Expression if you set this to a sensitivity that's appropriate for your singing voice.
Preset Protect	ON, OFF	With the factory settings, registrations cannot be saved at the preset buttons. If you turn Preset Protect OFF, registrations can be saved in the preset buttons as well (p. 78).

SYSTEM METRONOME

Here you can make metronome-related settings.

Parameter	Value	Description
Metro Mode	OFF	The metronome will not sound.
	PLAY-ONLY	The metronome will sound only while the Sound Looper is playing back.
	REC-ONLY	The metronome will sound only while the Sound Looper is recording.
	PLAY&REC	The metronome will sound while the Sound Looper is playing or recording.
	ALWAYS	The metronome will sound constantly.
Metro Level	0–10	Adjusts the volume of the metronome.

Parameter	Value	Description
Metro Sound		Selects the sound of the metronome.
	TYPE 1	Electronic metronome
	TYPE 2	Mechanical metronome
	TYPE 3	Pulse tone
	TYPE 4	Beep tone
	TYPE 5	Cowbell sound
	TYPE 6	Stick sound

SYSTEM CONTROL

Here you can make settings for the controllers that are made at the system level.

SYSTEM KEYBOARD

Here you can make settings for the keyboard and aftertouch.

Parameter	Value	Description
Kbd Velo	REAL, 1–127	Specifies the velocity value that will be transmitted when you play the keyboard. If you want actual keyboard velocity to be transmitted, set this to “REAL.” If you want a fixed velocity value to be transmitted regardless of how you play, specify the desired value (1–127).
Kbd Velo Curve		Adjusts the keyboard’s touch.
	LIGHT	Light weight synthesizer keyboard like
	MEDIUM	Standard
	HEAVY	Acoustic piano simulation
Kbd Velo Sens	-63– +63	Adjusts the sensitivity of the keyboard. As you increase this setting, higher velocity values will be transmitted according to the force with which you play. Normally you will leave this set at “0.”
Aft Source	REGIST, SYSTEM	The assignments for the aftertouch can be stored individually in each registration. When you select a different registration, this setting specifies whether the aftertouch will be given the assignments stored in the registration (REGIST), or the assignments stored in the system settings for the entire VP-770 (SYSTEM).
Aft Sens	0–100	Specifies the Aftertouch sensitivity. Higher values will allow Aftertouch to be applied more easily. Normally you will leave this at “100.”
Aft Assign		Specifies the aftertouch effect.
	OFF	Off
	MOD	Applies modulation.
	DYN1	Changes the volume. Transmits MIDI message CC#2 (breath control) to the sound generator section. This is the same operation as Voice Expression (p. 66), and will operate only in the positive (+) direction to increase the volume.
	DYN2	Changes the volume. Transmits MIDI message CC#4 (foot control) to the sound generator section. For STRINGS and BRASS sounds, this allows the volume to be controlled in the ± directions (it will not go to zero). For other sounds, the volume can be controlled only in the “+” direction.
	FILTER	Changes the tone.
	WAH	Applies a wah effect to sounds that support Wah.
	BEND-DOWN	Lowers the pitch.
	BEND-UP	Raises the pitch.
		Specifies the part(s) that will be controlled by aftertouch.
Aft Part	VOC/ENS	Vocal Designer part and Ensemble Part.
	VOC	Vocal Designer part only.
	ENS	Ensemble part only.
	OFF	Off

SYSTEM PEDAL

Here you can specify the functions that will be controlled by the foot pedals.

Parameter	Value	Description
Hold Source	REGIST, SYSTEM	The assignments for the hold pedal can be stored individually in each registration. When you select a different registration, this setting specifies whether the hold pedal will be given the assignments stored in the registration (REGIST), or the assignments stored in the system settings for the entire VP-770 (SYSTEM).
Hold Pol	STANDARD, REVERSE	Select the polarity of the Hold pedal. On some pedals, the electrical signal output by the pedal when it is pressed or released is the opposite of other pedals. If your pedal has an effect opposite of what you expect, set this parameter to "REVERSE." If you are using a Roland pedal (that has no polarity switch), set this parameter to "STANDARD."
Hold Part		Specifies the part(s) that will be controlled by the hold pedal.
	VOC/ENS	Vocal Designer part and Ensemble part.
	VOC	Vocal Designer part only.
	ENS	Ensemble part only.
P1 Source P2 Source	REGIST, SYSTEM	The assignments for the control pedal can be stored individually in each registration. When you select a different registration, this setting specifies whether the control pedal will be given the assignments stored in the registration (REGIST), or the assignments stored in the system settings for the entire VP-770 (SYSTEM).
P1 Asgn P2 Asgn		Specifies the function that will be controlled by the control pedal.
	OFF	Off
	MOD	Applies modulation.
	DYN1	Changes the volume. Transmits MIDI message CC#2 (breath control) to the sound generator section. This is the same operation as Voice Expression (p. 66), and will operate only in the positive (+) direction to increase the volume.
	DYN2	Changes the volume. Transmits MIDI message CC#4 (foot control) to the sound generator section. For STRINGS and BRASS sounds, this allows the volume to be controlled in the ± directions (it will not go to zero). For other sounds, the volume can be controlled only in the "+" direction.
	EXP	Changes the volume. Transmits MIDI message CC#11 (expression) to the sound generator section. The volume is controlled in a range of 0–127.
	FILTER	Changes the tone.
	WAH	Applies a wah pedal effect to sounds that support Wah.
	PIZZ/STAC	Plays the pizzicato or staccato sound (only for supported tones).
	FALL/TREM	Plays the fall or tremolo sound (only for supported tones).
	UNI/STK	Switches between unison mode and stack mode (only for supported tones).
	DOIT	Applies a doit effect (only for supported tones).
	PORT	Applies a portamento effect.
	AMB	Controls the depth of ambience.
	DIR-MIC	Controls the direct microphone volume.
	PROG-UP	Switches to the next registration.
	PROG-DOWN	Switches to the previous registration.
	PANEL-SW	Performs the operation specified for P1 Sw Asgn/P2 Sw Asgn.
P1 Sw Asgn P2 Sw Asgn		If P1 Asgn/P2 Asgn is set to "PANEL-SW," this specifies the operation that occurs when the control pedal turns on.
	REC/PLAY	Same operation as Sound Looper [REC/PLAY] button. * Rapidly pressing the pedal twice performs the same operation as the [STOP] button.
	STOP	Perform the same operation as Sound Looper [STOP] button.
P1 Pol P2 Pol	STANDARD, REVERSE	Selects the polarity of the pedal. On some pedals, the electrical signal output by the pedal when it is pressed or released is the opposite of other pedals. If your pedal has an effect opposite of what you expect, set this parameter to "REVERSE." If you are using a Roland pedal (that has no polarity switch), set this parameter to "STANDARD."
P1 Part P2 Part		Specifies the part(s) that will be controlled by the control 1/2 pedals.
	VOC/ENS	Vocal Designer part and Ensemble part.
	VOC	Vocal Designer part only.
	ENS	Ensemble part only.

SYSTEM S1/S2

Here you can specify the functions that will be controlled by the [S1]/[S2] buttons.

Parameter	Value	Description
Sw Source	REGIST, SYSTEM	The assignments for the [S1]/[S2] buttons can be stored individually in each registration. When you select a different registration, this setting specifies whether the [S1]/[S2] buttons will be given the assignments stored in the registration (REGIST), or the assignments stored in the system settings for the entire VP-770 (SYSTEM).
Sw1 Assign Sw2 Assign		Specify the functions that will be controlled by the [S1]/[S2] buttons.
	OFF	Off
	PIZZ/STAC	The pizzicato or staccato sound will be heard (only for supported tones).
	FALL/TREM	The fall or tremolo sound will be heard (only for supported tones).
	UNI/STK	Switches between unison mode and stack mode (only for supported tones).
	DOIT	Applies the doit effect (only for supported tones).
	PORT-ENS	Applies the portamento effect to the Ensemble.
	PORT-VOC	Applies the portamento effect to the Vocal Designer.
	AMB-OFF	Switches the ambience when you press the button.
	DIR-MIC-OFF	Switches the direct microphone when you press the button.
Sw1 Mode Sw2 Mode		Turns the [S1]/[S2] buttons function LATCH/MOMENTARY.
	LATCH	The on/off status will alternate each time you press [S1]/[S2] button.
	MOMENTARY	The status will be on only while you hold down [S1]/[S2] button.

SYSTEM D BEAM

Here you can specify the function that will be controlled by the D Beam.

Parameter	Value	Description
D Beam Source	REGIST, SYSTEM	The assignments for the D beam can be stored individually in each registration. When you select a different registration, this setting specifies whether the D beam will be given the assignments stored in the registration (REGIST), or the assignments stored in the system settings for the entire VP-770 (SYSTEM).
D Beam Sens	0–127	This sets the D Beam controller's sensitivity. Increasing this value will raise the sensitivity.
DB1 Select DB2 Select DB3 Select	FIX, ASGN	When a D Beam button is on, this setting specifies whether it will perform the function printed on the panel (FIX) or the function assigned by the DB1–3 Asgn settings (ASGN). * You can switch between FIX and ASGN at any time by holding down the D Beam button for several seconds.
DB1 Asgn DB2 Asgn DB3 Asgn	MOD, DYN1, DYN2, EXP, FILTER, WAH, PIZZ/STAC, FALL/TREM, UNI/STK, DOIT, PORT, PITCH	These settings specify the function that will be controlled by the D Beam when DB1–3 Select is set to "ASGN." * For details on each value, refer to p. 85.
DB1 Range Lo DB2 Range Lo DB3 Range Lo	0–127	Specifies the depth of the effect when the D Beam controller is not responding. Increasing this value will apply an effect even if the D Beam controller is not responding at all.
DB1 Range Hi DB2 Range Hi DB3 Range Hi	0–127	Specifies the depth of the effect when the D Beam controller is responding to its maximum extent. Reducing this value will reduce the amount of effect produced by the D Beam controller.
DB1 Polarity DB2 Polarity DB3 Polarity	STANDARD, REVERSE	Inverts the change that occurs when you move your hand above the sensor.
DB1 Part DB2 Part DB3 Part		Specifies the part(s) that will be controlled by the D Beam.
	VOC/ENS	Vocal Designer part and Ensemble part.
	VOC	Vocal Designer part only.
	ENS	Ensemble part only.

Input Effect Settings (INPUT EFFECTS)

You can apply effects to the microphone input. You can use three different vocal effects as input effects.

- 1. Press the [MENU] button to access the MENU screen.**
- 2. Use the cursor buttons or the value dial to select “Input Effects,” then press the [F2] (ENTER) button.**

The INPUT EFFECTS screen will appear.

For an explanation of each input effect parameter and how to save the changes you make, refer to “Applying effects to the microphone” (p. 32).

Backing Up to USB Memory (UTILITY-PROJECT)

Here's how you can back up the VP-770's registrations and system settings, or restore the backed-up data back into the VP-770.

Backing Up to USB Memory (USER BACKUP)

You can back up the following data to USB memory.

- Registrations you've saved
- System settings

The following data cannot be backed up.

- The factory-set registrations
- A registration that is currently being edited and has not yet been saved
- The phrase held in the Sound Looper
- Audio Key settings and the audio files used by Audio Key

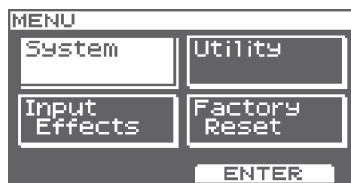
* If USB memory contains other backup data, executing the backup operation will overwrite the previously stored backup data. If your USB memory already contains important backup data, you must use a different USB memory device.



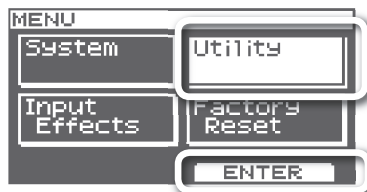
Backup Procedure

1. Connect your USB memory (sold separately) to the USB MEMORY connector (p. 22).

2. Press the [MENU] button to access the MENU screen.



3. Use the cursor buttons or the value dial to select "Utility," then press the [F2] (ENTER) button.



The UTILITY screen will appear.

4. Use the cursor buttons or the value dial to select “Project (USB),” then press the [F2] (ENTER) button.



The PROJECT screen will appear.

5. Use the cursor buttons or the value dial to select “User Backup,” then press the [F2] (EXECUTE) button.



6. The confirmation message will appear, then press the [F1] (OK) button to start backup.

When the display indicates “Completed!” the backup has been completed.

If you decide not to execute the backup, press the [EXIT] button to return to the previous screen.

Restoring the Backup Data (USER RESTORE)

Here's how the data backed up to USB memory can be restored to the VP-770. When you execute the restore operation, the registrations and system settings inside the VP-770 will be overwritten.

- 1. Connect your USB memory (sold separately) to the USB MEMORY connector (p. 22).**
- 2. Press the [MENU] button to access the MENU screen.**
- 3. Use the cursor buttons or the value dial to select "Utility," then press the [F2] (ENTER) button.**
The UTILITY screen will appear.
- 4. Use the cursor buttons or the value dial to select "Project (USB)," then press the [F2] (ENTER) button.**



The PROJECT screen will appear.

- 5. Use the cursor buttons or the value dial to select "User Restore," then press the [F2] (EXECUTE) button.**



- 6. The confirmation message will appear, then press the [F1] (OK) button to start restore.**

When the display indicates "Completed!" the restore has been completed.

If you decide not to execute the restore, press the [EXIT] button to return to the previous screen.

Format USB Memory

This formats (initializes) the USB memory that's connected to the USB MEMORY connector.

* If the format of the USB memory is other than FAT, it won't be recognized by the VP-770. (Nor will the VP-770 be able to format it.) In this case, use your computer to format the USB memory using the "FAT" or "FAT32" file system. (If you're using Mac OS X, format the USB memory using the "MS-DOS file system (FAT32).")

1. **Connect your USB memory (sold separately) to the USB MEMORY connector (p. 22).**
2. **Press the [MENU] button to access the MENU screen.**
3. **Use the cursor buttons or the value dial to select "Utility," then press the [F2] (ENTER) button.**

The UTILITY screen will appear.

4. **Use the cursor buttons or the value dial to select "Project (USB)," then press the [F2] (ENTER) button.**



The PROJECT screen will appear.

5. **Use the cursor buttons or the value dial to select "Format USB Memory," then press the [F2] (EXECUTE) button.**



6. **The confirmation message will appear, then press the [F1] (OK) button to start format.**

When the display indicates "Completed!" the format has been completed.

If you decide not to execute the format, press the [EXIT] button to return to the previous screen.

Transmitting Registration Data to an External MIDI Device (UTILITY-BULK DUMP)

Here's how to transmit the contents of the registration and the system setup data to an external MIDI device. This operation is called "bulk dump."

1. **Use a MIDI cable (optional) to connect the VP-770's MIDI OUT connector to the MIDI IN connector on an external sequencer (p. 116).**
2. **Press the [MENU] button to access the MENU screen.**
3. **Use the cursor buttons or the value dial to select "Utility," then press the [F2] (ENTER) button.**

The UTILITY screen will appear.

4. **Use the cursor buttons or the value dial to select "Bulk Dump," then press the [F2] (ENTER) button.**

The BULK DUMP screen will appear.



5. **Use the cursor buttons or the value dial to select the content that will be transmitted, and press the [F2] (EXECUTE) button.**

Parameter	Transmitted content
Preset/User Regist	Saved registrations
Temporary Regist	The registration currently being edited
All Data	The above two items and the system settings

The confirmation message will appear.

6. **Put the external sequencer in record mode.**
7. **Press the [F1] (OK) button to transmit the settings.**
The message "Processing..." appears in the display during transmission of the data.
After the transmitting is finished, the display will indicate "Complete!"
8. **Stop the external sequencer.**

Restoring Data That was Transmitted to an External MIDI Sequencer

1. Use a MIDI cable (sold separately) to connect your external MIDI sequencer's MIDI OUT connector to the VP-770's MIDI IN connector (p. 116).
2. Switch OFF the "SysEx Protect" setting (p. 97).
3. Have your external MIDI sequencer transmit the recorded bulk dump data to the VP-770.

The registrations stored in the VP-770 will be rewritten.

4. Turn the "SysEx Protect" setting (p. 97) back ON again.

* If you are restoring only the Temporary Regist, there's no need to switch off the "SysEx Protect" setting (p. 97).

Checking the VP-770's Version (UTILITY-VERSION INFO)

1. Press the [MENU] button to access the MENU screen.
2. Use the cursor buttons or the value dial to select "Utility," then press the [F2] (ENTER) button.
The UTILITY screen will appear.
3. Use the cursor buttons or the value dial to select "Version Info," then press the [F2] (ENTER) button.

Here's how to check the VP-770's software version.



Screensaver Settings (UTILITY-SCREENSAVER)

This feature allows you to have a simple animation be displayed whenever the VP-770 has not been operated for a certain period of time.

1. Press the [MENU] button to access the MENU screen.
2. Use the cursor buttons or the value dial to select "Utility," then press the [F2] (ENTER) button.

The UTILITY screen will appear.

3. Use the cursor buttons or the value dial to select "Screensaver," then press the [F2] (ENTER) button.

The SCREENSAVER screen will appear.



4. Use the cursor buttons and the value dial to change the value.

Parameter	Value	Description
Type	1-5	Select the type of screensaver.
Time	OFF, 5 min-60 min	Set the time (minutes) until the screensaver begins working. If this is OFF, the screensaver will not appear.



You can press the [F1] (CHECK) button to get a look at the screensaver image at the size of the actual screen.

5. If you want to save the edited setting in system memory, press the [F2] (SYS WRITE) button.

Reset to Default Factory Settings (FACTORY RESET)

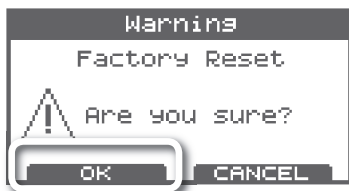
This restores all data in the VP-770 to the factory-set condition (Factory Reset).

* If there is important registration data you've created that's stored in the VP-770, all such registration data is discarded when a Factory Reset is performed. If you want to keep the existing data, save it on a USB memory (p. 103) or record the bulk dump to your MIDI sequencer (p. 107).

- 1. Press the [MENU] button to access the MENU screen.**
- 2. Use the cursor buttons or the value dial to select "Factory Reset," then press the [F2] (ENTER) button.**

The Factory Reset screen will appear.

- 3. Press the [F1] (OK) button to execute the Factory Reset.**



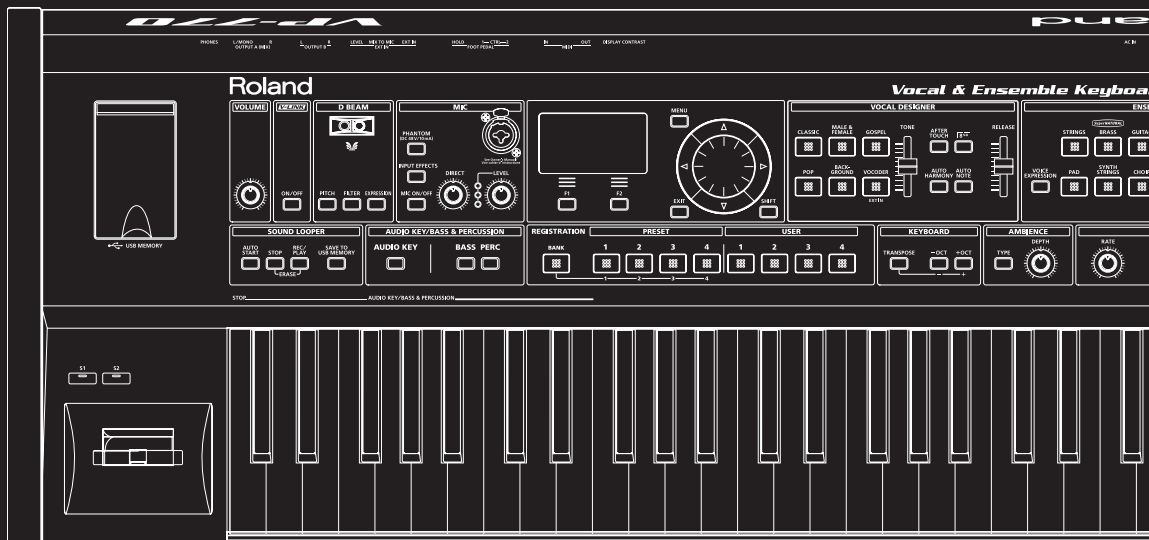
If you decide not to execute the Factory Reset, press the [F2] (CANCEL) button.

When the display indicates "Completed!" the Factory Reset has been completed.

* Never turn off the power until the Factory Reset process has been completed.

Applications

This chapter describes various setups in which you can use the VP-770.

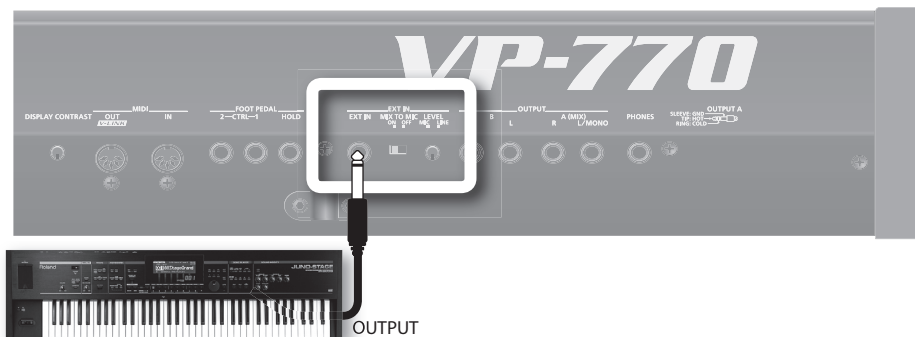


Using the Sound of an External Synthesizer (EXT IN)

If you want the audio that's being input via the rear panel EXT IN jack to be the carrier (the signal that is the basis of the sound), hold down the [SHIFT] button and press the [VOCODER] sound button, and then choose the bottom sound in the list that appears.

In this case, turn the rear panel [MIX TO MIC] switch "OFF."

1. Connect your external synthesizer to the EXT IN jack as shown.



2. Turn the [LEVEL] knob of EXT IN to "LINE."



This knob adjusts the level of the signal that's input from the EXT IN jack. (Turn the knob toward "MIC" to increase the level, or toward "LINE" to decrease it.) If you're connecting a line-level device such as a synthesizer, set the knob toward the "LINE" position.

3. Turn the [MIX TO MIC] switch "OFF."



The [MIX TO MIC] switch selects whether the sound from the EXT IN jack is used as the microphone input (modulator) (ON) or as the carrier (OFF). Since we're using this sound as the carrier, select the "OFF" position.

4. Hold down the [SHIFT] button and press the [VOCODER] sound button, and then choose the bottom sound in the list that appears.

5. Play the keyboard of your external synthesizer.



6. While holding down a note, vocalize into the microphone.



If you don't hear sound, check the following

- Is the microphone input level raised? (→ p. 28)
- Is the [MIC ON/OFF] button lit? (→ p. 31)

Vocal Designer will produce sound according to the volume of your voice.



You can also connect a synthesizer that doesn't have a keyboard (often called a "sound module"). In this case, connect the VP-770's MIDI OUT connector to the MIDI IN connector of your sound module, and use the VP-770's keyboard to play the sound module.

→ Refer to "Connecting the VP-770 with MIDI equipment" (p. 116) for more about MIDI connections.

Adjusting the volume of your external synthesizer

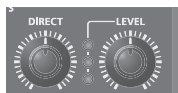
Adjust the volume of your external synthesizer so that the sound isn't distorted.

The VP-770's MIC LEVEL indicator won't respond if the [MIX TO MIC] switch is "OFF," so you'll need to make this adjustment in the following way.

1. Set the [MIX TO MIC] switch "ON."



2. Play your external synthesizer, and adjust its volume so that the yellow LEVEL indicator lights at the peaks in the sound.



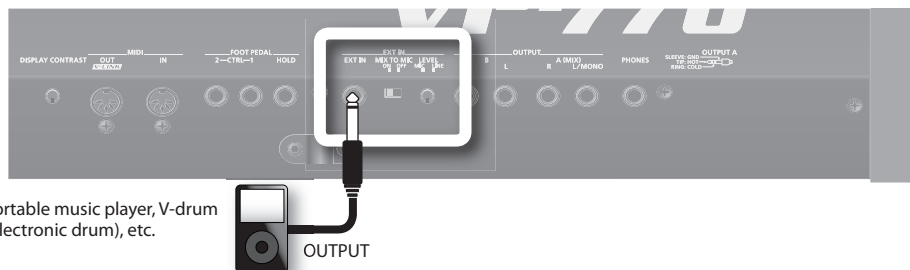
3. Return the [MIX TO MIC] switch to "OFF."



"Performing" Sound from Drums or a Portable Music Player

Here's a really cool trick. The VP-770 lets you "perform" using the sound from a V-drum (electronic drum) or a portable music player connected to the microphone input instead of your voice.

1. Connect your audio source to the EXT IN jack as shown.



Portable music player, V-drum (electronic drum), etc.

2. Set the [LEVEL] knob of EXT IN to "LINE."



This knob adjusts the level of the sound that is input from the EXT IN jack. (Turning the knob toward "MIC" increases the level, and turning it toward "LINE" decreases the level.) If you've connected a line-level device, you should set this knob to the "LINE" position.



3. Turn the [MIX TO MIC] switch "ON."



The [MIX TO MIC] switch specifies whether the sound from the EXT IN jack will be used as a microphone input (modulator; the ON setting) or as the carrier (the OFF setting). Since we're using the sound as a microphone input, select the "ON" setting.



4. Choose a Vocal Designer sound.

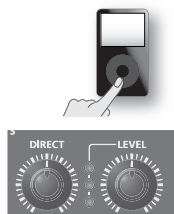


The character of the output sound will depend on the sound you choose. You'll want to try out various sounds.

5. Play your audio source.

6. Adjust the input level.

While you watch the VP-770's LEVEL indicator, adjust the volume of your external audio source.



7. Play the VP-770's keyboard.

The sound from your external audio source will be heard according to the pitch you play on the keyboard.

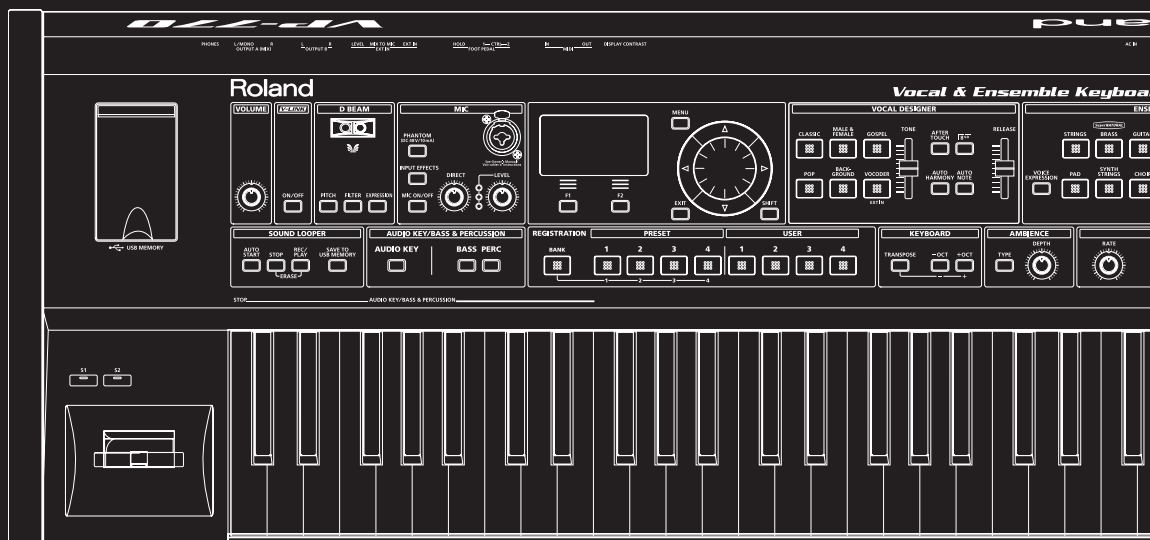
That's right — the VP-770 lets you "perform" absolutely any sound.

If you don't hear sound, check the following

- Is the [MIC ON/OFF] button lit? (→ p. 31)

Appendix

Here you'll find information about connecting and using external MIDI equipment, about V-LINK, troubleshooting, and the main specifications.



Connecting the VP-770 with MIDI Equipment

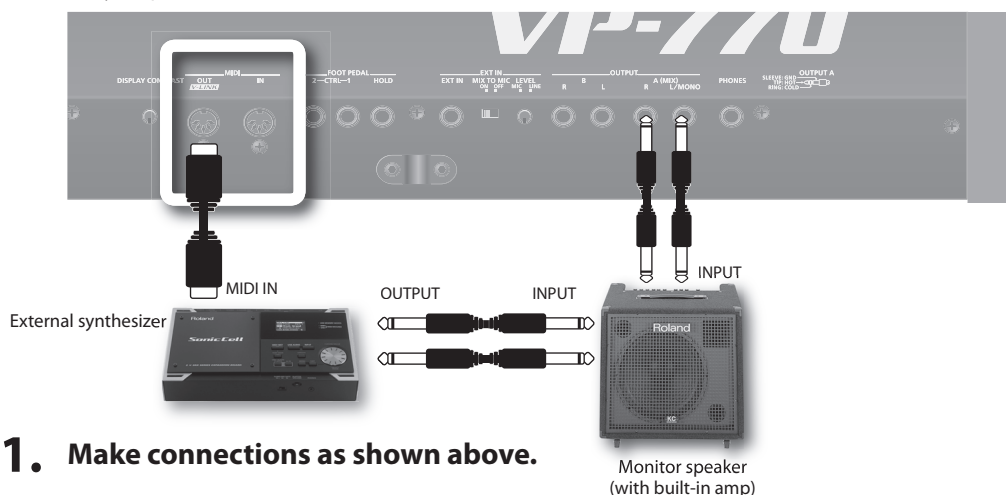


What's MIDI?

MIDI (Musical Instrument Digital Interface) is a world-wide standard for transferring performance data and other musical information between electronic musical instruments and computer. By using MIDI cables to connect devices that are equipped with a MIDI connector, you can use a single MIDI keyboard to play multiple instruments, create ensembles using multiple MIDI instruments, automatically switch settings as a song progresses, and do much more.

Connecting a Synthesizer via MIDI

Here's how you can use the VP-770's keyboard to play an external MIDI-connected synthesizer, for example to layer a piano with the VP-770's vocal sounds.



1. **Make connections as shown above.**
2. **Set the "MIDI receive channel" of your external synthesizer to 2, and select a piano sound.**

The performance data of the Vocal Designer part (MIDI channel 2) will play your external synthesizer. The following table shows the factory settings. You are free to change the MIDI channel by editing the system settings (p. 97).



The VP-770's MIDI transmit/receive channels

Part	MIDI transmit channel (fixed)	MIDI receive channel (fixed)
Vocal Designer	CH2 ^(*)	CH2
Ensemble	CH1 ^(*)	CH1
Bass & Percussion	CH3	CH3

(*)1 Transmitted even if the sound button is off.

3. **Play the VP-770's keyboard.**

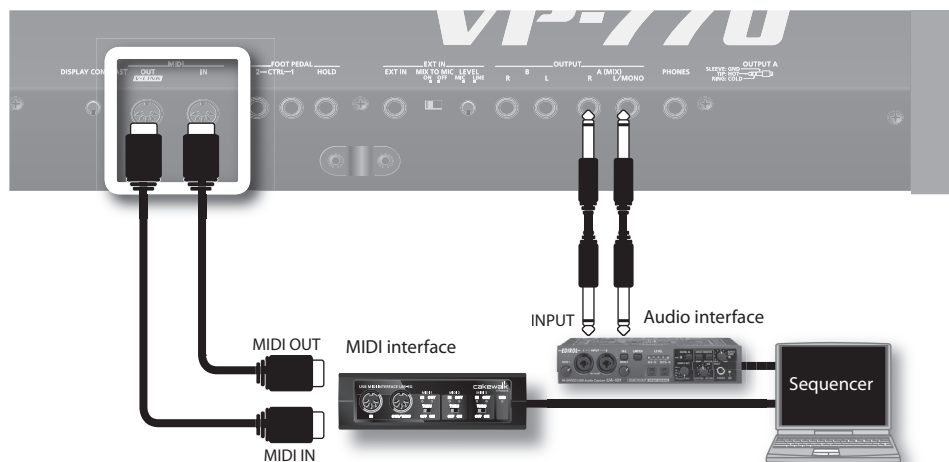
You'll hear the piano sound from your synthesizer together with the sound of the VP-770.



Alternatively, you can connect your external MIDI keyboard's MIDI OUT connector to the VP-770's MIDI IN connector, and use your external MIDI keyboard to play the VP-770.

Connecting a Sequencer via MIDI

You can use your MIDI sequencer to record the keyboard performance data from the VP-770, and record your vocal via the microphone as you listen to the sequencer playback. With the VP-770 connected to your sequencer, you'll be able to use it as part of your studio setup.



1. **Make connections as shown above.**
2. **Perform on the VP-770 as you listen to the song on your sequencer, and record the performance data from the VP-770 on a MIDI track of the sequencer.**

There are two advantages to recording just your keyboard performance ahead of time.

- You'll be able to concentrate on the keyboard (or microphone)
- You'll be able to use your sequencer to edit (correct) your keyboard performance

For example if you've already recorded the backing chorus or melody, all you have left to do is sing!

3. **Play back your sequencer, and vocalize into the microphone that's connected to the VP-770. Then record the VP-770's OUTPUT signal onto an audio track of your sequencer.**



An example of more sophisticated studio work

Record the backing chorus part on a MIDI track, and route the audio track containing a previously-recorded main vocal to the VP-770's rear panel EXT IN jack (as the microphone input). Now you can listen through your monitor speakers while trying out various settings on the VP-770, and continue experimenting with different variations of backing chorus as long as you wish.

The VP-770 system is extremely simple; the audio from the microphone input is played according to the notes of the MIDI data. This very simplicity allows a virtually infinite range of uses.

About V-LINK



What is V-LINK?

V-LINK (**V-LINK**) is a function that allows music and images to be performed together. By using MIDI to connect two or more V-LINK compatible devices, you can easily enjoy performing a wide range of visual effects that are linked to the expressive elements of a music performance. For example, if you use the VP-770 in conjunction with the EDIROL P-10, you'll be able to do the following.

- Use the VP-770's keyboard (the far-left octave) to switch images.
- Use the VP-770's pitch bend lever to control the image playback speed.
- Use the VP-770's three [VIBRATO] knobs to control the image. The [DEPTH] knob controls the brightness and hue of the image and the [DELAY TIME] knob controls the saturation of the image.

Connection Examples

As an example, we will use a setup in which the VP-770 is connected to the EDIROL P-10. Use a MIDI cable to connect the VP-770's MIDI OUT connector to the MIDI IN connector of the EDIROL P-10.



Turning the V-LINK ON/OFF

1. Press the [V-LINK] button so the indicator is lighted.

The V-LINK setting will be on.

In this state, you can operate the VP-770 to manipulate images in sync with your performance.

2. Press the [V-LINK] button again.

The [V-LINK] button will go out, and the V-LINK setting will be off.

V-LINK Settings

1. Press the [V-LINK] button.
2. Press the [F1] (EDIT) button.
V-LINK EDIT screen will appear.
3. Use the cursor buttons and the value dial to change the value.

Parameter	Value	Description
Tx Ch	Ch1–Ch16	MIDI channel that will control the V-LINK device.
Speed	0.0-1.0-2.0, 0.5-1.0-2.0, 0.0-1.0-4.0, 0.5-1.0-4.0, 0.0-1.0-8.0, 0.5-1.0-8.0, 0.0-1.0-16.0, 0.5-1.0-16.0, 0.0-1.0-32.0, 0.5-1.0-32.0, 0.0-2.0-4.0, 0.0-4.0-8.0, 0.0 8.0-16.0, 0.0-16.0-32.0, -1.0-0.0-1.0, -2.0-1.0-4.0, -6.0-1.0-8.0	Range of video playback speed The three values are the playback speeds (multiples of normal speed) at the left, center, and right positions of the pitch bend.
Local Sw	ON, OFF	When V-LINK is on, this setting specifies whether the far-left octave of keys will play sounds (ON) or not (OFF). * This parameter is not saved in system memory. It will always be ON when the VP-770 starts up.

3. If you want to save your settings, press the [F2] (SYS WRITE) button.
For details on saving, refer to “Saving the System Settings” (p. 96).
4. When you’ve finished making settings, press the [EXIT] button.



MIDI Implementation Chart

Date : Jan. 05, 2009

Model: VP-770

Version : 1.00

Function...		Transmitted	Recognized	Remarks
Basic Channel	Default Changed	1-16 1-16	1-16 1-16	Can be stored in memory
Mode	Default Messages Altered	Mode 3 X *****	Mode 3 X	
Note Number :	True Voice	O *****	0-127 0-127	
Velocity	Note On Note Off	O O	O O	
After Touch	Key's Channel's	X X	X X	
Pitch Bend		O	O	
Control Change	0, 32	O	*1 O	*1 Bank select
	1	O	O	*1 Modulation
	2	O	O	*1 Dynamics 1
	4	O	O	*1 Dynamics 2
	5	O	*2 X	Portamento time
	7	O	O	*1 Volume
	10	X	O	*1 Panpot
	11	O	O	*1 Expression
	16	O	O	*1 Filter
	17	O	O	*1 Wah
	18	O	O	*1 Variation 1
	19	O	O	*1 Variation 2
	20	O	O	*1 Variation 3
	21	O	O	*1 Variation 4
	64	O	O	*1 Hold 1
	65	O	O	*1 Portamento
	71	O	*2 X	Resonance
	72	O	O	*1 Release time
	73	O	O	*1 Attack time
	74	O	*2 X	Cutoff
	76	O	O	*1 Vibrato rate
	77	O	O	*1 Vibrato depth
	78	O	O	*1 Vibrato delay
Program Change	: True Number	O *****	*1 O 0-127	*1
System Exclusive		O	O	*1
System Common	: Song Position	X	X	
	: Song Select	X	X	
	: Tune Request	X	X	
System Realtime	: Clock	X	X	
	: Commands	X	X	
Aux Messages	: All Sound Off	X	O	
	: Reset All Controllers	X	O	
	: Local On/Off	X	X	
	: All Notes Off	X	O (123-127)	
	: Active Sensing	O	O	
	: System Reset	X	X	
Notes		*1 Switchable between O and X *2 Transmission possible only when V-LINK is on		

Mode 1 : OMNI ON, POLY
Mode 3 : OMNI OFF, POLY

Mode 2 : OMNI ON, MONO
Mode 4 : OMNI OFF, MONO

O : Yes
X : No

Main Specifications

VP-770: Vocal & Ensemble Keyboard

Keyboard

49 keys (with velocity and channel aftertouch)

Tones

Vocal Designer

CLASSIC, MALE & FEMALE, GOSPEL, POP, BACKGROUND, VOCODER, EXT IN

Ensemble

STRINGS, SuperNATURAL BRASS, GUITAR, OTHERS, PAD, SYNTH STRINGS, CHOIR, JAZZ SCAT

Bass & Percussion

BASS, PERC

Ambience

HALL1, HALL2, STUDIO

Maximum Polyphony

128 voices (varies according to the sound generator load)

Auto Harmony Function

6 types

Auto Note Function

Chromatic, Diatonic (Key Assignable)

Audio Key Function

File Format: WAV, AIFF (44.1 kHz, 16-bit linear), MP3

Sound Looper Function

Maximum Recording Time: 18 Seconds

Recording Method: Overdubbing

Play Method: Loop Play

Controllers

D Beam Controller

Pitch Bend / Modulation Lever

Assignable Switches (S1, S2)

V-LINK Button

Octave Shift

-3 to +3 Octave

Key Transpose

-5 to +6 (in semitones)

Number of Registration Memories

Preset: 16

User: 16

Master Tune

415.3 Hz to 466.2 Hz

Nominal Input Level

INPUT (MIC): -50 to -10 dBu

INPUT (EXT IN): -36 to +4 dBu

Input Effects

3 Band Equalizer

Compressor

Noise Suppressor

Connectors

Headphones Jack (Stereo 1/4 inch phone type)

Output Jacks A (L/MONO, R) (1/4 inch TRS phone type)

Output Jacks B (L, R) (1/4 inch phone type)

Mic Jack: 1/4 inch phone type or XLR type (phantom power)

External Input Jack (1/4 inch phone type)

MIDI Connectors (IN, OUT)

Hold Pedal Jack

Expression Pedal Jack (1, 2)

AC Inlet

USB Memory Connector

Display

128 x 64 dots graphic LCD (with backlit)

External Storage Device

USB Flash Memory

Power Supply

AC 115 V, AC 117 V, AC 220 V, AC 230 V, AC 240 V (50/60 Hz)

Power Consumption

16 W

Dimensions

886 (W) x 369 (D) x 118 (H) mm

34-15/16 (W) x 14-9/16 (D) x 4-11/16 (H) inches

Weight

11 kg / 24 lbs 5 oz

Accessories

Owner's Manual

Leaflet "Using the Unit Safely"

Audio Key Utility 3 Quick Guide

CD-ROM (Audio Key Utility 3)

Hands-free Microphone DR-HS5

USB Memory Protector, Hex Wrench, Hex Screw

Power Cord

Options

Keyboard Stand: KS-12

Pedal Switch: DP Series

Expression Pedal: EV-5

(0 dBu = 0.775 V rms)

* In the interest of product improvement, the specifications and/or appearance of this unit are subject to change without prior notice.

Troubleshooting

Problem	Explanation
Power won't turn on!	Is the power cord connected correctly? (→ p. 17)
No sound!	Is the VP-770 correctly connected to your amp, speaker, or headphones? (→ p. 18)
	Is the VP-770's volume raised? (→ p. 26)
Vocal Designer won't sound!	Even if you're playing the keyboard, the Vocal Designer part won't sound unless you're vocalizing into the microphone. → For details, refer to "Performing with Vocal Designer" (→ p. 27)
	Is a Vocal Designer sound button lit? (→ p. 27)
	Is your microphone switched on?
	Is your microphone connected correctly? (→ p. 19)
	Is the microphone input level raised? (→ p. 28)
	Is the [MIC ON/OFF] button lit? (→ p. 31)
	Could the "Split" parameter be turned "ON"? (→ p. 54)
DIRECT (MIC) won't sound!	Is the microphone input level raised? (→ p. 28)
	Is the [MIC ON/OFF] button lit? (→ p. 31)
Ensemble won't sound!	Is the Ensemble [LEVEL] slider raised? (→ p. 44)
	Is an Ensemble sound button lit? (→ p. 42)
	Could the "Split" parameter be turned "ON"? (→ p. 54)
Bass & Percussion won't sound!	Is a Bass & Percussion sound button lit? (→ p. 48)
	Bass & Percussion won't sound outside its range of keys (→ p. 48).
The volume level of the instrument connected to EXT IN jack is too low.	Could you be using a connection cable that contains a resistor? Use a connection cable that does not contain a resistor.
LEVEL indicator does not light!	If the [MIX TO MIC] switch is "OFF," the LEVEL indicator will no longer respond to the sound from the EXT IN jack. In this case, temporarily set the [MIX TO MIC] switch "ON" and adjust the input level. (→ p. 113)
Voice Expression doesn't work!	Is the microphone input level raised? (→ p. 28)
	Is the [MIC ON/OFF] button lit? (→ p. 31)
	Could you be operating the Expression pedal? Advancing the Expression pedal all the way to the maximum position means that the same effect as Voice Expression is already applied to the maximum extent, so no further effect can be obtained.
Voice Expression works too much!	Lower the voice expression sensitivity (→ p. 66). This will prevent the Voice Expression effect from applying until your voice reaches a louder volume.

Problem	Explanation
Sound continues even though I'm not playing the keyboard!	Could you be using a hold pedal that has the incorrect polarity? Please use a Roland DP series hold pedal.
The pitch is wrong!	Could the [TRANPOSE], [+OCT], [-OCT] button be on? (→ p. 52)
	Could the Vocal Designer [8va] button be on? (→ p. 35)
	Is the Master Tune set correctly? (→ p. 98)
	Could something be resting on the D Beam? (→ p. 60)
The volume decreases when I switch sounds!	Could you be pressing the expression pedal? When you switch sounds, the expression pedal value is reset to the minimum position. After you've switched sounds, please operate the expression pedal once again.
The notes sound strange in the upper registers of the keyboard.	Sometimes when playing the keys in the upper part of the VP-770's keyboard, the sound may stop, or the pitch may stop rising; or with certain keys, there may be intermittent noise. This occurs mainly when the VP-770's upper pitch limit is exceeded, so this issue doesn't arise in the ranges normally used. But, in any case, it does not indicate a malfunction.
When the volume is raised, there are noises!	Could the [LEVEL] knob of EXT IN on the rear panel be turned all the way to the "MIC" side? If the [LEVEL] knob of EXT IN on the rear panel (→ p. 20) is set maximum to the "MIC" side, there may be noises. There might be noises even if there is nothing connected to the EXT IN jack, but this not a malfunction. The noise can be reduced in the following way. <ul style="list-style-type: none"> • Turn the [LEVEL] knob of EXT IN to the "LINE" side until the noise is less noticeable. • If a microphone is connected to the [MIC] jack, set the [MIX TO MIC] switch to "OFF."

Error Messages

If an incorrect operation is performed, or if processing could not be performed as you specified, an error message will appear. Refer to the explanation for the error message that appears, and take the appropriate action.

Message	Meaning	Action
Checksum Error!	The received system exclusive message has an incorrect checksum value.	Correct the checksum value.
File Not Found!	The file was not found in USB memory.	Save the file once again in USB memory.
Illegal File!	The VP-770 cannot use this file.	Do not use this file.
MIDI Buffer Full!	An unusually large amount of MIDI data was received, and could not be processed.	Reduce the amount of MIDI messages that are being transmitted.
MIDI Offline!	The MIDI IN connection was broken.	Check that there is no problem with the MIDI cable connected to the VP-770's MIDI IN, and that the MIDI cable was not disconnected.
Read Error!	Failed to load data from USB memory.	Make sure that USB memory is correctly connected.
	It may be that the file is damaged.	Do not use this file.
	This file cannot be loaded since its format is incorrect.	Do not use this file.
System Memory Damaged!	It is possible that the contents of system memory have been damaged.	Please execute a Factory Reset. If this does not resolve the problem, contact your dealer.
USB Memory Not Ready!	USB memory is not connected.	Connect USB memory.
	The VP-770 is unable to correctly handle the USB memory that is inserted.	_____
Write Error!	Failed to write data to USB memory.	Make sure that USB memory is correctly connected.
	Writing is impossible because the USB memory key is full.	Delete unneeded files from the USB memory. Alternatively, use a different USB memory key, one that has free space.
	The file or the USB memory itself is write protected.	Make sure that the file or the USB memory is not write protected.

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List of VP-770 Shortcut Keys

Shortcut	Screen	Page
SHIFT + 	V-LINK EDIT	p. 118
SHIFT + 	D BEAM 1/2/3 SETTINGS	p. 60
SHIFT + 	INPUT EFFECTS	p. 32
SHIFT + 	LOOPER SETUP	p. 74
SHIFT + 	AUDIO KEY LEVEL	p. 72
SHIFT + 	BASS & PERC EDIT	p. 48
SHIFT + 	REGISTRATION LIST	p. 79
SHIFT + 	VOCAL LIST	p. 27
SHIFT + 	AFTERTOUCH SETTINGS	p. 64
SHIFT + 	AUTO HARMONY	p. 36
SHIFT + 	AUTO NOTE	p. 38
SHIFT + 	ENSEMBLE LIST	p. 42
SHIFT + 	VOICE EXP SETTING	p. 66
SHIFT + 	OCTAVE SETTINGS	p. 52
SHIFT + 	REGISTRATION EDIT	p. 83
SHIFT + 	S1/S2 SETTINGS	p. 58
SHIFT + 	BENDER SETTINGS	p. 56
SHIFT + 	HOLD SETTINGS	p. 62
SHIFT + 	PEDAL 1/2 SETTINGS	p. 62

